

Department of CSE(AI&ML)

CO/PO Mapping

Odd Semester

Sem: IV

Session-2023-24

1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 26



KIET Group of Institutions, Delhi – NCR, Ghaziabad

Department of CSE(AI & ML)

Program Name: B.Tech

Course Name: Sensor and Instrumentation

Course Outcomes

Academic Session: 2023-24

Course Code: BOE-405

Year:2024

Semester: IV

Course Coordinator Name: Dr. Snigdha Chaturvedi

After completion of the course, the student will be able to		Relevant POs/ PSOs/ APOs	Revised Bloom's Level (BL)	Knowledge Category (KC)
CO No.	Statement of Course Outcome			
CO1	Apply the use of sensors for measurement of displacement, force, and pressure.	PO1, PO2, PO3, PO4, PO11, PSO1, PSO2	3	C, P
CO2	Employ commonly used sensors in industry for measurement of temperature, position, accelerometer, vibration sensor, flow and level.	PO1, PO2, PO3, PO4, PO5, PO9, PO11, PSO1, PSO2	3	C, P
CO3	Demonstrate the use of virtual instrumentation in automation industries.	PO1, PO2, PO3, PO4, PO5, PO6, PSO1, PSO2	3	F, P
CO4	Identify and use data acquisition methods	PO1, PO2, PO3, PO4, PO5, PO6, PO5, PSO2	1	C, P
CO5	Comprehend intelligent instrumentation in industrial automation	PO1, PO2, PO3, PO4, PO5, PO6, PSO1, PSO2	2	C, P

Faculty Members Teaching the Course	Signature
L. Rajesh Yadav	Rajesh Yadav

Signature of Course Coordinator

Assoc./ Asst. Head DOC

Signature of Addl. HoD

Signature of HoD

Please Note (Reference: OBE Guidelines wef. Session 2021 – 22)

- ❖ The theory courses/ project having credits 3 to 6 should have 5 number of COs. The laboratory course/ mini project/ seminar/ industrial training having credits less than 3 should have 3 number of COs. The Project having 7 to 12 credits should have 6 to 10 number of COs.
- ❖ The statement of a CO must be formed considering a proper structure having mandatory and optional parts. The mandatory parts are Action & Knowledge and optional parts are Condition and Criteria.

KIE Group of Institutions, Delhi – NCR, Ghaziabad

Department of CSE (AI & ML)

Program Name: B.Tech
Course Name: Sensor and Instrumentation

Academic Session: 2023-24
Course Code: BOE-405

Year: 2024 Semester: IV
Course Coordinator Name: Dr. Snigdha Chaturvedi

CO - PO/PSO/APO Matrix

CO No.	Programme Outcome (PO)												PSO/ APO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	2	2	2	-	-	-	-	-	-	2	-	3	2
CO2	3	3	2	3	2	-	-	-	-	-	3	-	2	2
CO3	3	2	2	3	3	3	-	-	-	-	2	-	2	2
CO4	2	3	2	2	2	3	2	-	-	-	2	-	2	2
CO5	2	2	2	2	2	2	-	-	-	-	2	-	2	2
PO Target	2.6	2.4	2.0	2.4	2.2	2.6	2.0	-	-	-	2.4	-	2.2	2.0

Faculty Members Teaching the Course

1. Rajesh Yadav

Signature *Rajesh Yadav*

Signature of Course Coordinator

Assoc./ Asst. Head DOC

Signature of Addl HoD

Signature of HoD

Please Note (Reference: OBE Guidelines wef. Session 2021 – 22)

- ❖ The strength of correlation between COs and POs/ PSOs/APOs should be represented as 1 (low correlation), 2 (medium correlation) and 3 (high correlation) in CO - PO/APO/PSO Matrix.
- ❖ If there is no correlation, then put a "-" (dash).

KIET Group of Institutions, Delhi – NCR, Ghaziabad

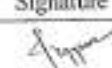
Department of CSE(AI&ML)

Program Name: B.Tech
Course Name: Technical Communication
Course Outcomes

Academic Session: 2023-24
Course Code: KAS-401

Year:2024 Semester: VI
Course Coordinator Name: Ms. Jigyasa Chaudhary

After completion of the course, the student will be able to		Relevant POs/ PSOs/ APOs	Revised Bloom's Level (BL)	Knowledge Category (KC)
CO No.	Statement of Course Outcome			
CO1	Understand the nature and objective of technical communication relevant for the work place as engineers.	PO9, PO10.	2	C
CO2	Develop an understanding of key concepts of writing, designing, and speaking.	PO9, PO10.	3	P
CO3	Utilize the technical writing skills for the purposes of technical communication and its exposure in various dimensions.	PO9, PO10.	3	P
CO4	Build Up interpersonal communication traits that will make the transition from institution to the workplace smoother and help them to excel in their jobs.	PO9, PO10.	3	C
CO5	Apply technical communication to build their personal brand and handle crisis communication.	PO9, PO10.	3	C

Faculty Members Teaching the Course	Signature
1. Ms. Jigyasa Chaudhary	

Signature of Course Coordinator

Assoc./ Asst. Head DOC

Signature of Addl. HoD

Signature of HoD

Please Note (Reference: OBE Guidelines wef. Session 2021 – 22)

- ❖ The theory courses/ project having credits 3 to 6 should have 5 number of COs. The laboratory course/ mini project/ seminar/ industrial training having credits less than 3 should have 3 number of COs. The Project having 7 to 12 credits should have 6 to 10 number of COs.
- ❖ The statement of a CO must be formed considering a proper structure having mandatory and optional parts. The mandatory parts are Action & Knowledge and optional parts are Condition and Criteria.

KIET Group of Institutions, Delhi – NCR, Ghaziabad

Department of CSE (AI&ML)

Program Name: B. Tech
Course Name: Technical Communication

Academic Session: 2023-24
Course Code: KAS-401

Year: 2024 Semester: VI
Course Coordinator Name: Ms. Jigyasa Chaudhary

CO - PO/PSO/APO Matrix

CO No.	Programme Outcome (PO)												PSO/ APO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	-	-	-	-	-	-	-	-	3	3	-	-	-	-
CO2	-	-	-	-	-	-	-	-	3	3	-	-	-	-
CO3	-	-	-	-	-	-	-	-	3	3	-	-	-	-
CO4	-	-	-	-	-	-	-	-	3	3	-	-	-	-
CO5	-	-	-	-	-	-	-	-	3	3	-	-	-	-
PO Target	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Faculty Members Teaching the Course	Signature
1. Ms. Jigyasa Chaudhary	

Signature of Course Coordinator

Assoc./ Asst. Head DOC

Signature of Addl. HoD

Signature of HoD3

Please Note (Reference: OBE Guidelines wef. Session 2021 – 22)

- ❖ The strength of correlation between COs and POs/ PSOs/APOs should be represented as 1 (low correlation), 2 (medium correlation) and 3 (high correlation) in CO - PO/APO/PSO Matrix.
- ❖ If there is no correlation, then put a "-" (dash).

KIET Group of Institutions, Delhi – NCR, Ghaziabad

Department of CSE(AI&ML)

Program Name: B.Tech
Course Name: Operating System
Course Outcomes

Academic Session: 2023-24
Course Code: BCS-401

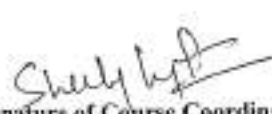
Year:2024
Semester: IV
Course Coordinator Name: Dr. Shelly Gupta

After completion of the course, the student will be able to		Relevant POs/ PSOs/ APOs	Revised Bloom's Level (BL)	Knowledge Category (KC)
CO No.	Statement of Course Outcome			
CO1	Acquire knowledge of the operating system and its functionalities, components, and terminologies used in the subject.	PO1, PO2, PO3, PO4, PO5, PO10, PO12 PSO1, PSO2	2	F,C
CO2	Analyse the role of process synchronization and the concept of concurrent processes in the operating system	PO1, PO2, PO3, PO4, PO5, PO10, PO12 PSO1, PSO2	4	C, P
CO3	Evaluate the process scheduling scenarios based on the existing methods and techniques used in the operating system.	PO1, PO2, PO3, PO4, PO5, PO10, PO12 PSO1, PSO2	5	C, P
CO4	Analyse the memory management mechanism used in the operating system and how the operating system optimizes memory usage.	PO1, PO2, PO3, PO4, PO5, PO10, PO12 PSO1, PSO2	4	C, P
CO5	Analyse the working of input and output management; and how the operating system performs the disk management.	PO1, PO2, PO3, PO4, PO5, PO10, PO12 PSO1, PSO2	4	C, P

Faculty Members Teaching the Course

1. Dr. Priyanka Chandani
2. Ms. Bhawna

Signature


Signature of Course Coordinator


Assoc./ Asst. Head DOC


Signature of Addl. HoD


Signature of HoD

Please Note (Reference: OBE Guidelines wef. Session 2021 – 22)

- ❖ The theory courses/ project having credits 3 to 6 should have 5 number of COs. The laboratory course/ mini project/ seminar/ industrial training having credits less than 3 should have 3 number of COs. The Project having 7 to 12 credits should have 6 to 10 number of COs.
- ❖ The statement of a CO must be formed considering a proper structure having mandatory and optional parts. The mandatory parts are Action & Knowledge and optional parts are Condition and Criteria.

Program Name: B.Tech
Course Name: Operating System

Department of CSE (AI&ML)

Academic Session: 2023-24
Course Code: BCS-401

Year: 2024 Semester: IV
Course Coordinator Name: Dr. Shelly Gupta

CO - PO/PSO/APO Matrix

CO No.	Programme Outcome (PO)												PSO/ APO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	1	1	1	1					1		3	2	1
CO2	3	3	3	3	3					1		3	2	1
CO3	3	3	3	3	3					1		3	2	1
CO4	3	3	3	3	3					1		3	2	1
CO5	3	3	3	3	3					1		3	2	1
PO Target	3	2.6	2.6	2.6	2.6					1		3	2	1

Faculty Members Teaching the Course

- Dr. Priyanka Chandani
- Ms. Bhawna

Signature

Signature of Course Coordinator

Assoc./ Asst. Head DOC

Signature of Addl. HoD

Signature of HoD

Please Note (Reference: OBE Guidelines wef. Session 2021 – 22)

- The strength of correlation between COs and POs/ PSOs/APOs should be represented as 1 (low correlation), 2 (medium correlation) and 3 (high correlation) in CO - PO/APO/PSO Matrix.
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KIE Group of Institutions, Delhi – NCR, Ghaziabad

Department of CSE(AI&ML)

Program Name: B. Tech

Academic Session: 2023-24

Year:2024

Semester: IV

Course Name: Theory of Automata & Formal Languages

Course Code: BCS-402

Course Coordinator Name: Mr. Dinesh Kumar

Course Outcomes

After completion of the course, the student will be able to		Relevant POs/ PSOs/ APOs	Revised Bloom's Level (BL)	Knowledge Category (KC)
CO No.	Statement of Course Outcome			
CO1	Understand basic concepts of automata theory and formal languages.	PO1, PO11, PO12, PSO1, PSO2	2	C
CO2	Construct finite automata and regular expressions for regular languages.	PO1, PO2, PO3, PO11, PO12, PSO1, PSO2	3	C, P
CO3	Illustrate regular and context-free grammar for formal languages.	PO1, PO2, PO3, PO11, PO12, PSO1, PSO2	3	C, P
CO4	Construct the pushdown automata for context-free languages.	PO1, PO2, PO3, PO11, PO12, PSO1, PSO2	3	C, P
CO5	Explore Turing machines for formal languages.	PO1, PO2, PO3, PO11, PO12, PSO1, PSO2	3	C, P

Faculty Members Teaching the Course	Signature
1. Ms. Umang Kant	

Signature of Course Coordinator

Assoc./ Asst. Head DOC

Signature of Addl. HoD

Signature of HoD

Please Note (Reference: OBE Guidelines wef. Session 2021 – 22)

- ❖ The theory courses/ project having credits 3 to 6 should have 5 number of COs. The laboratory course/ mini project/ seminar/ industrial training having credits less than 3 should have 3 number of COs. The Project having 7 to 12 credits should have 6 to 10 number of COs.
- ❖ The statement of a CO must be formed considering a proper structure having mandatory and optional parts. The mandatory parts are Action & Knowledge and optional parts see Condition and Criteria.

KIET Group of Institutions, Delhi – NCR, Ghaziabad

Department of CSE (AI&ML)

Program Name: B.Tech

Academic Session: 2023-24

Year: 2024

Semester: IV

Course Name: Theory of Automata & Formal Languages Course Code: BCS-402

Course Coordinator Name: Mr. Dinesh Kumar

CO - PO/PSO/APO Matrix

CO No.	Programme Outcome (PO)												PSO/ APO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	2	-	-	-	-	-	-	-	-	-	-	1	2	-
CO2	3	2	2	-	-	-	-	-	-	-	-	1	2	-
CO3	3	2	1	-	-	-	-	-	-	-	-	1	2	-
CO4	3	2	2	-	-	-	-	-	-	-	-	1	2	-
CO5	3	3	2	-	-	-	-	-	-	-	-	1	2	-
PO Target	2.8	2.25	1.75	-	-	-	-	-	-	-	-	1	2	-

Faculty Members Teaching the Course	Signature
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1. Ms. Umang Kam

Signature of Course Coordinator

Assoc./ Asst. Head DOC

Signature of Addl. HoD

Signature of HoD

Please Note (Reference: OBE Guidelines w.e.f. Session 2021 – 22)

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KIET Group of Institutions, Delhi – NCR, Ghaziabad

Department of CSE(AI&ML)

Program Name: B. Tech

Academic Session: 2023-24

Year: II

Semester: IV

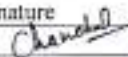
Course Name: Object Oriented Programming with Java

Course Code: BCS-403

Course Coordinator Name: Mr. Abhishek Goyal

Course Outcomes

After completion of the course, the student will be able to		Relevant POs/ PSOs	Revised Bloom's Level (BL)	Knowledge Category (KC)
CO No.	Statement of Course Outcome			
CO1	Implement core Java concepts that model real world entities.	PO1, PO2, PO3, PO4, PO5, PO12	3	P
CO2	Implement special features of Java like Exception Handling and Multithreading	PO1, PO2, PO3, PO4, PO5, PO12, PSO1	3	P
CO3	Develop Programs based on New Java features (JDK 8+).	PO1, PO2, PO3, PO4, PO5, PO12, PSO1	3	P
CO4	Apply a collection framework to build modular Java programs.	PO1, PO2, PO3, PO4, PO5, PO11, PO12, PSO1	3	P
CO5	Implement web and RESTful Web Services with Spring Boot using Spring Framework concepts	PO1, PO2, PO3, PO4, PO5, PO11, PO12, PSO1	3	P

Faculty Members Teaching the Course	Signature
Ms. Chanchal Maurya	

Signature of Course Coordinator

Assoc./ Asst. Head DOC

Signature of Addl. HoD

Signature of HoD

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- ◆ The statement of a CO must be formed considering a proper structure having mandatory and optional parts. The mandatory parts are Action & Knowledge and optional parts are Condition and Criteria.

KIET Group of Institutions, Delhi – NCR, Ghaziabad
Department of CSE(AI&ML)

Program Name: B.Tech

Academic Session: 2023-24

Year: II

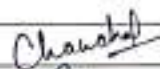
Semester: IV

Course Name: Object Oriented Programming with Java Course Code: BCS-403

Course Coordinator Name: Mr. Abhishek Goyal

CO - PO/PSO/APO Matrix

CO No.	Programme Outcome (PO)												PSO	
	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	PSO-1	PSO-2
CO1	2	3	2	2	2	-	-	-	-	-	-	2	-	-
CO2	2	3	2	2	2	-	-	-	-	-	-	2	2	-
CO3	2	3	2	2	2	-	-	-	-	-	-	3	2	-
CO4	2	2	2	2	3	-	-	-	-	-	2	3	2	-
CO5	2	3	3	3	2	-	-	-	-	-	2	3	2	-
PO Target	2	2.8	2.2	2.2	2.2	-	-	-	-	-	2	2.6	2	-

Faculty Members Teaching the Course	Signature
Ms. Chanchal Maurya	

Signature of Course Coordinator

Assoc./ Asst. Head DOC

Signature of Addl. HoD

Signature of HoD

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- ♦ If there is no correlation, then put a “-” (dash).

KIET Group of Institutions, Delhi – NCR, Ghaziabad

Department of CSE(AI&ML)

Program Name: B.Tech
Course Name: Operating System Lab

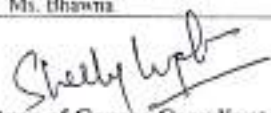
Academic Session: 2023-24
Course Code: BCS-451

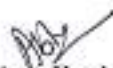
Year: 2024 Semester: IV
Course Coordinator Name: Dr. Shelly Gupta

Course Outcomes

After completion of the course, the student will be able to		Relevant POs/ PSOs/ APOs	Revised Bloom's Level (BL)	Knowledge Category (KC)
CO No.	Statement of Course Outcome			
CO1	Apply knowledge of basic UNIX System calls to solve various software problems	PO1, PO2, PO3, PO4, PO5, PO9, PO10, PO12 PSO1, PSO2	3	C, P
CO2	Design, develop and implement programs for deadlock handling and interpret various CPU scheduling algorithms.	PO1, PO2, PO3, PO4, PO5, PO9, PO10, PO12 PSO1, PSO2	4	P
CO3	Apply and analyze different page replacement algorithms and disk scheduling algorithms.	PO1, PO2, PO3, PO4, PO5, PO9, PO10, PO12 PSO1, PSO2	3	C, P

Faculty Members Teaching the Course	Signature
1. Dr. Priyanka Chandani 2. Ms. Bhawna	


Signature of Course Coordinator


Assoc./ Asst. Head DOC


Signature of Addl. HoD


Signature of HoD

Please Note (Reference: OBE Guidelines wef. Session 2021 – 22)

- ❖ The theory courses/ project having credits 3 to 6 should have 5 number of COs. The laboratory course/ mini project/ seminar/ industrial training having credits less than 3 should have 3 number of COs. The Project having 7 to 12 credits should have 6 to 10 number of COs.
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 KIET Group of Institutions, Delhi – NCR, Ghaziabad

Department of CSE(AI&ML)

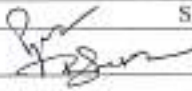
Program Name: B.Tech
Course Name: Operating System Lab

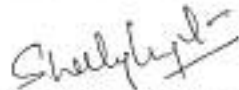
Academic Session: 2023-24
Course Code: BCS-451

Year: 2024 Semester: IV
Course Coordinator Name: Dr. Shelly Gupta

CO - PO/PSO/APO Matrix

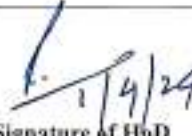
CO No.	Programme Outcome (PO)												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	2	2	1	1				2	2		1	2	1
CO2	3	2	2	1	1				2	2		1	2	1
CO3	3	2	2	1	1				2	2		1	2	1
PO Target	3	2	2	1	1				2	2		1	2	1

Faculty Members Teaching the Course	Signature
1. Dr. Priyanka Chandani 2. Ms. Bhawna	


Signature of Course Coordinator


Assoc./ Asst. Head DOC


Signature of Addl. HoD


Signature of HoD

Please Note (Reference: OBE Guidelines wef. Session 2021 – 22)

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- ✦ If there is no correlation, then put a "-" (dash).

KIET Group of Institutions, Delhi – NCR, Ghaziabad

Department of CSE(AI&ML)

Program Name: B.Tech

Course Name: OOPS with JAVA Lab

Course Outcomes

Academic Session: 2023-24

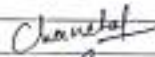
Course Code: BCS-452

Year: II

Semester: 4th

Course Coordinator Name: Dr. Abhishek Goyal

After completion of the course, the student will be able to		Relevant POs/ PSOs	Revised Bloom's Level (BL)	Knowledge Category (KC)
CO No.	Statement of Course Outcome			
CO1	Perform core JAVA OOPS concepts on an integrated development environment to solve real world problems.	PO1, PO2, PO3, PO4, PO5, PO12, PSO1	3	P
CO2	Apply Exception Handling and Multithreading JAVA features in problem solving.	PO1, PO2, PO3, PO4, PO5, PO12, PSO1	3	P
CO3	Solve problems in context of programming code based on New Java features (JDK 8+).	PO1, PO2, PO3, PO4, PO5, PO12, PSO1	3	P
CO4	Develop a solution for case study-based problem using JAVA Collection framework.	PO1, PO2, PO3, PO4, PO5, PO11, PO12, PSO1	3	P
CO5	Design RESTful Web Services with Spring Boot Test using Spring Framework concepts	PO1, PO2, PO3, PO4, PO5, PO11, PO12, PSO1	3	P

Faculty Members Teaching the Course	Signature
Ms. Chanchal Maurya	

Signature of Course Coordinator

Assoc./ Asst. Head DOC

Signature of Addl. HoD

Signature of HoD

Please Note (Reference: OBE Guidelines wef. Session 2021 – 22)

- ◆ The theory courses/ project having credits 3 to 6 should have 5 number of COs. The laboratory course/ mini project/ seminar/ industrial training having credits less than 3 should have 3 number of COs. The Project having 7 to 12 credits should have 6 to 10 number of COs.
- ◆ The statement of a CO must be formed considering a proper structure having mandatory and optional parts. The mandatory parts are Action & Knowledge and optional parts are Condition and Criteria.

KIET Group of Institutions, Delhi – NCR, Ghaziabad

Department of CSE(AI&ML)

Program Name: B. Tech
Course Name: OOPS with JAVA Lab

Academic Session: 2023-24
Course Code: BCS-452

Year: II Semester: 4th
Course Coordinator Name: Dr. Abhishek Goyal

CO - PO/PSO/APO Matrix

CO No.	Programme Outcome (PO)												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	2	2	2	2	2	-	-	-	-	-	-	2	2	-
CO2	2	2	2	2	2	-	-	-	-	-	-	2	2	-
CO3	2	2	2	2	2	-	-	-	-	-	-	3	2	-
CO4	2	2	2	2	2	-	-	-	-	-	2	2	2	-
CO5	2	2	3	3	2	-	-	-	-	-	2	2	2	-
PO Target	2	2	2.2	2.2	2	-	-	-	-	-	2	2.2	2	-

Faculty Members Teaching the Course	Signature
Ms. Chanchal Maurya	Chanchal

Signature of Course Coordinator

Assoc./ Asst. Head DOC

Signature of Addl. HoD

Signature of HoD

Please Note (Reference: OBE Guidelines wef. Session 2021 – 22)

- The strength of correlation between COs and POs/ PSOs/APOs should be represented as 1 (low correlation), 2 (medium correlation) and 3 (high correlation) in CO - PO/APO/PSO Matrix.
- If there is no correlation, then put a "-" (dash).

KIET Group of Institutions, Delhi – NCR, Ghaziabad

Department of CS(AI&ML)

Program Name: B.Tech.
Course Name: Cyber Security

Academic Session: 2023 -2024
Course Code: BCC - 401

Year: II Semester: IV
Course Coordinator Name: Ms. Supriya Dubey

Course Outcomes

CO No.	Statement of Course Outcome	Relevant POs/ PSOs/ APOs	Revised Bloom's Level (BL)	Knowledge Category (KC)
CO1	Understand the basic concepts and terminology of cyber security and cybercrimes.	PO1, PO2, PO4, PO7, PO8, PO12, PSO1	2	F/C
CO2	Understand the security issues and preventive measures in mobile communication.	PO1, PO2, PO4, PO5, PO7, PO8, PO12, PSO1	2	F/C
CO3	Understand various cyber-attacks along with the tools and methods used in cybercrime	PO1, PO2, PO4, PO5, PO7, PO8, PO12, PSO1	2	F/C
CO4	Understand the concepts of cyber forensics and its implications in Social Networking websites	PO1, PO2, PO4, PO7, PO8, PO12, PSO1	2	F/C
CO5	Understand the cyber security policies and cyber laws	PO1, PO2, PO4, PO5, PO6, PO7, PO8, PO12, PSO1	2	F/C

Faculty Members Teaching the Course	Signature
Ms. Kavya Gupta	

Signature of Course Coordinator

Assoc./ Asst. Head DOC

Signature of Addl. HoD

Signature of HoD

Please Note (Reference: OBE Guidelines wef. Session 2021 – 22)

- ❖ The theory courses/ project having credits 3 to 6 should have 5 number of COs. The laboratory course/ mini project/ seminar/ industrial training having credits less than 3 should have 3 number of COs. The Project having 7 to 12 credits should have 6 to 10 number of COs.
- ❖ The statement of a CO must be formed considering a proper structure having mandatory and optional parts. The mandatory parts are Action & Knowledge and optional parts are Condition and Criteria.

KIET Group of Institutions, Delhi – NCR, Ghaziabad

Department of CS(AI&ML)

Program Name: B.Tech.
Course Name: Cyber Security

Academic Session: 2023 -2024
Course Code: BCC - 401

Year: II Semester: IV
Course Coordinator Name: Ms. Supriya Dubey

CO - PO/PSO/APO Matrix

CO No.	Programme Outcome (PO)												PSO/ APO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	2	1	-	3	-	-	1	2	-	-	-	2	1	-
CO2	2	1	-	3	1	-	1	2	-	-	-	2	1	-
CO3	2	1	-	3	3	-	1	2	-	-	-	2	1	-
CO4	2	1	-	3	-	-	1	2	-	-	-	2	1	-
CO5	1	1	-	3	1	3	1	3	-	-	-	2	1	-
PO Target	1.8	1	-	3	1.67	3	1	2.2	-	-	-	2	1	-

Faculty Members Teaching the Course	Signature
Ms. Kavya Gupta	

Signature of Course Coordinator

Assoc./ Asst. Head DOC

Signature of Addl. HoD

Signature of HoD

Please Note (Reference: OBE Guidelines wcf. Session 2021 – 22)

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KIET Group of Institutions, Delhi – NCR, Ghaziabad

Department of CSE(AI&ML)

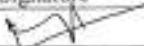
Program Name: B.Tech.
Course Name: Cyber Security Workshop

Academic Session: 2023-2024
Course Code: BCS - 453

Year: II Semester: IV
Course Coordinator Name: Ms. Kavya Gupta

Course Outcomes

After completion of the course, the student will be able to		Relevant POs/ PSOs/ APOs	Revised Bloom's Level (BL)	Knowledge Category (KC)
CO No.	Statement of Course Outcome			
CO1	Understand various web application protocols used in data transmission and demonstrate by capturing and analysing network transmission.	PO1, PO2, PO4, PO5, PO6, PO7, PO8, PO12, PSO1	3	C, P
CO2	Understand principles of web security monitoring and analyzing the nature of attacks through cyber/computer forensics software/tools	PO1, PO2, PO4, PO5, PO6, PO7, PO8, PO12, PSO1	3	C, P
CO3	Recognize web application security vulnerabilities and demonstrate how to determine if they are present in web applications using cyber/computer forensics software/tools.	PO1, PO2, PO4, PO5, PO6, PO7, PO8, PO12, PSO1	3	C, P

Faculty Members Teaching the Course	Signature	Faculty Members Teaching the Course	Signature
Ms. Kavya Gupta		Ms. Umang Kant	

Signature of Course Coordinator

Assoc./ Asst. Head DOC

Signature of Addl. HoD

Signature of HoD

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Department of CSE(AI&ML)

Program Name: B.Tech.
Course Name: Cyber Security Workshop

Academic Session: 2023-2024
Course Code: BCS-453

Year: II Semester: IV
Course Coordinator Name: Ms. Kavya Gupta

CO - PO/PSO/APO Matrix

CO No.	Programme Outcome (PO)												PSO/ APO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	2	-	2	3	1	2	3	-	-	-	2	1	-
CO2	3	3	-	2	3	1	2	3	-	-	-	2	1	-
CO3	3	3	-	2	3	1	2	3	-	-	-	2	1	-
PO Target	3	2.67	-	2	3	1	2	3	-	-	-	2	1	-

Faculty Members Teaching the Course	Signature	Faculty Members Teaching the Course	Signature
Ms. Kavya Gupta		Ms. Umang Kant	


Signature of Course Coordinator


Assoc./ Asst. Head DOC


Signature of Addl. HoD


Signature of HoD

Please Note (Reference: OBE Guidelines vol. Session 2021 – 22)

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Department of CSE(AI&ML)

CO/PO Mapping

Odd Semester

Sem: VI

Session-2023-24

20

SEMESTER- VI													
Sl. No.	Subject Codes	Subject	Periods			Evaluation Scheme				End Semester		Total	Credit
			L	T	P	CT	TA	Total	PS	TE	PE		
1	KAI601	Machine Learning Techniques	3	1	0	30	20	50		100		150	4
2	KCS602	Web Technology	3	1	0	30	20	50		100		150	4
3	KCS603	Computer Networks	3	1	0	30	20	50		100		150	4
4	Deptt. Elective-III	Departmental Elective-III	3	0	0	30	20	50		100		150	3
5		Open Elective-I [Annexure - B(iv)]	3	0	0	30	20	50		100		150	3
6	KAI651	Machine Learning Lab	0	0	2				25		25	50	1
7	KCS652	Web Technology Lab	0	0	2				25		25	50	1
8	KCS653	Computer Networks Lab	0	0	2				25		25	50	1
9	KNC601/ KNC602	Constitution of India. Law and Engineering / Indian Tradition, Culture and Society	2	0	0	15	10	25		50			
10		MOOCs (Essential for Hons. Degree)											
		Total										900	21

Departmental Elective-I

1. KAI051 Mathematical Foundation AI, ML and Data Science
2. KCS052 Web Designing
3. KDS051 Business Intelligence and Analytics
4. KCS054 Object Oriented System Design
5. KDS052 Distributed System

Departmental Elective-II

1. KML051 Cloud Computing
2. KAI052 Natural Language Processing
3. KCS056 Application of Soft Computing
4. KAI053 Intelligent Database System
5. KCS502 Compiler Design

Departmental Elective-III

1. KAI061 Cyber Forensic analytics
2. KDS061 Image Analytics
3. KML061 Advanced Machine Learning
4. KML062 Stream Processing and Analytics
5. KDS063 Software Engineering

KIET Group of Institutions, Delhi – NCR, Ghaziabad

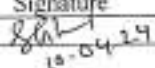
Department of CSE(AI&ML)

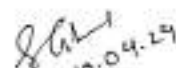
Program Name: B.Tech
Course Name: Machine Learning Techniques
Course Outcomes

Academic Session: 2023-24
Course Code: KA1-601

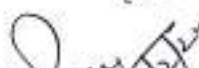
Year: 2024 Semester: VI
Course Coordinator Name: Dr. Sayani Ghosal

After completion of the course, the student will be able to		Relevant POs/ PSOs/ APOs	Revised Bloom's Level (BL)	Knowledge Category (KC)
CO No.	Statement of Course Outcome			
CO1	Understand the core concepts of machine learning, including various learning types and problem formulations, and major approaches in machine learning.	PO1, PO2, PSO2	2	C
CO2	Apply regression (linear, logistic) and classification (support vector machines) techniques, interpret results, and evaluate model performance.	PO1, PO2, PO3, PO4, PO5, PO6, PO12, PSO2	3	P
CO3	Apply decision trees, understand attribute selection criteria, and utilize instance-based learning methods like k-nearest neighbors effectively.	PO1, PO2, PO3, PO4, PO5, PO6, PO12, PSO2	3	P
CO4	Construct artificial neural networks by training and optimization, and explore deep learning concepts for image classification.	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO12, PSO2	6	P
CO5	Analyze reinforcement learning algorithms (Markov decision processes, Q-learning) and evolutionary algorithms (genetic algorithms) for sequential decision-making and optimization tasks.	PO1, PO2, PO6, PSO2	4	P

Faculty Members Teaching the Course	Signature
1. Dr. Sayani Ghosal	


Signature of Course Coordinator


Assoc./ Asst. Head DOC


Signature of Asst. HoD


Signature of HoD

Please Note (Reference: OBE Guidelines wef. Session 2021 – 22)

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KIET Group of Institutions, Delhi – NCR, Ghaziabad

Department of CSE (AI&ML)

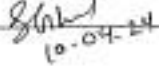
Program Name: B.Tech
Course Name: Machine Learning Techniques

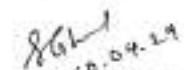
Academic Session: 2023-24
Course Code: KAI-601

Year: 2024
Semester: VI
Course Coordinator Name: Dr. Sayani Ghosal

CO - PO/PSO/APO Matrix

CO No.	Programme Outcome (PO)												PSO/ APO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	2	-	-	-	-	-	-	-	-	-	1	-	3
CO2	3	3	2	2	3	1	-	-	-	-	-	3	-	3
CO3	3	3	3	2	3	1	-	-	-	-	-	3	-	3
CO4	3	3	3	2	3	2	2	2	2	-	-	3	-	3
CO5	3	2	-	-	-	2	-	-	-	-	-	3	-	3
PO Target	3	2.6	2.6	2	3	1.5	2	2	2	-	-	2.3	-	3

Faculty Members Teaching the Course	Signature
1. Dr. Sayani Ghosal	


Signature of Course Coordinator


Assoc./ Asst. Head DOC


Signature of Addl. HoD


Signature of HoD

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KIET Group of Institutions, Delhi – NCR, Ghaziabad

Department of CSE(AI&ML)

Program Name: B.Tech
Course Name: Web Technology
Course Outcomes

Academic Session: 2023-24
Course Code: KCS-602

Year:2024 Semester: VI
Course Coordinator Name: Ms. Gargi Singh

After completion of the course, the student will be able to		Relevant POs/ PSOs/ APOs	Revised Bloom's Level (BL)	Knowledge Category (KC)
CO No.	Statement of Course Outcome			
CO1	Demonstrate Java programs for window-based applications.	PO1, PO2, PO3, PO4, PO5, PO 11, PO12	3	C, P
CO2	Illustrate static, interactive web pages using HTML, CSS, and XML.	PO1, PO3, PO4, PO5, PO9, PO12	4	C, P
CO3	Apply JavaScript, AJAX, and socket programming for client-server applications.	PO1, PO2, PO3, PO4, PO5, PO 11, PO12	4	C, P
CO4	Develop enterprise-level applications and manipulate databases using JDBC.	PO1, PO2, PO3, PO4, PO5, PO 11, PO12, PSO2	5	C, P
CO5	Design interactive web applications using Servlets and JSP.	PO1, PO2, PO3, PO4, PO5, PO 11, PO12, PSO2	5	C, P

Faculty Members Teaching the Course	Signature
1. Ms. Gargi Singh	

Signature of Course Coordinator

Assoc./ Asst. Head DOC

Signature of Addl. HoD

Signature of HoD

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KILT Group of Institutions, Delhi – CR, Ghaziabad

Department of CSE(AI&ML)

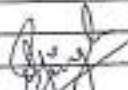
Program Name: B.Tech
Course Name: Web Technology

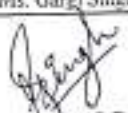
Academic Session: 2023-24
Course Code: KCS-602

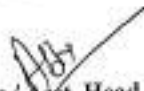
Year: 2024 Semester: VI
Course Coordinator Name: Ms. Gargi Singh

CO - PO/PSO/APO Matrix

CO No.	Programme Outcome (PO)												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	2	2	3	3	3	-	-	-	-	-	2	2	-	-
CO2	2	-	2	2	3	-	-	-	2	-	-	2	-	-
CO3	2	2	3	3	3	-	-	-	-	-	2	2	-	-
CO4	3	3	3	3	3	3	-	-	-	-	-	3	-	1
CO5	3	2	3	2	3	-	-	-	-	-	2	2	-	1
PO Target	2.4	2.2	2.8	2.6	3.0	3.0	0	0	2.0	0	2.0	2.2	-	1

Faculty Members Teaching the Course	Signature
L. Ms. Gargi Singh	

 Signature of Course Coordinator

 Assoc./ Asst. Head DOC

 Signature of Addl. HoD

 Signature of HoD

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KIET Group of Institutions, Delhi – NCR, Ghaziabad

Department of CSE(AI&ML)

Program Name: B.Tech

Academic Session: 2023-24

Year:2024

Semester: VI

Course Name: Computer Networks

Course Code: KCS-603

Course Coordinator Name: Dr. Abha Kiran Rajpoot

Course Outcomes

After completion of the course, the student will be able to		Relevant POs/ PSO's/ APOs	Revised Bloom's Level (BL)	Knowledge Category (KC)
CO No.	Statement of Course Outcome			
CO1	Apply the knowledge of networking concepts and functionality of physical layer.	PO1, PO2, PO3, PO4, PO5, PO11, PO12,PSO1	3	C, P
CO2	Explore the concept of elementary data link layer protocol to build a robust network.	PO1, PO2, PO3, PO4, PO5, PO11, PO12,PSO1	3	C, P, M
CO3	Analyze the concept of routing and IP addressing in network layer.	PO1, PO2, PO3, PO4, PO5, PO11, PO12,PSO1	4	F, C, P
CO4	Examine the usage and working of transport layer.	PO1, PO2, PO3, PO4, PO5, PO6, PO11, PO12,PSO1	4	C, P
CO5	Determine the performance of different protocols used at application layer.	PO1, PO2, PO3, PO4, PO5, PO6, PO11, PO12,PSO1	3	C, P

Faculty Members Teaching the Course	Signature
1. Dr. Abha Kiran Rajpoot	

Signature of Course Coordinator

Assoc./ Asst. Head DOC

Signature of Addl. HoD

Signature of HoD

Please Note (Reference: OBE Guidelines w.e.f. Session 2021 – 22)

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- If there is no correlation, then put a "-" (dash).

KIEP Group of Institutions, Delhi – NCR, Ghaziabad

Department of CSE(AI&ML)

Program Name: B.Tech
Computer Networks
CO - PO/PSO/APO Matrix

Academic Session: 2023-24
Course Code: KCS-603

Year:2024 Semester: VI Course Name:
Course Coordinator Name: Dr. Abha Kiran Rajpoot

CO No.	Programme Outcome (PO)												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	2	1	1	2	-	-	-	-	-	1	2	1	-
CO2	3	3	1	1	1	-	-	-	-	-	1	2	2	-
CO3	3	2	1	1	2	-	-	-	-	-	1	2	2	-
CO4	3	3	1	1	2	1	-	-	-	-	3	2	2	-
CO5	3	2	1	1	2	2	-	-	-	-	1	2	2	-
PO Target	3	2.5	1	1	1.6	1.5	-	-	-	-	1	2	1.8	-

Faculty Members Teaching the Course	Signature
1. Dr. Abha Kiran Rajpoot	

 Signature of Course Coordinator

 Assoc./ Asst. Head DOC

 Signature of Addl. HoD

 Signature of HoD

Please Note (Reference: OBE Guidelines wef. Session 2021 – 22)

- ◆ The strength of correlation between COs and POs/ PSOs/APOs should be represented as 1 (low correlation), 2 (medium correlation) and 3 (high correlation) in CO - PO/APO/PSO Matrix.
- ◆ If there is no correlation, then put a "-" (dash).

KIET Group of Institutions, Delhi – NCR, Ghaziabad

Department of CSE(AI&ML)

Program Name: B.Tech

Course Name: Software Engineering (DE-3)

Course Outcomes

Academic Session: 2023-24

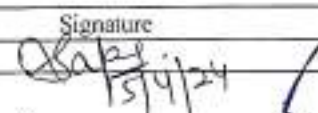
Course Code: KDS-463

Year:2024

Semester: VI

Course Coordinator Name: Dr. Sapna Juneja

After completion of the course, the student will be able to		Relevant POs/ PSOs/ APOs	Revised Bloom's Level (BL)	Knowledge Category (KC)
CO No.	Statement of Course Outcome			
CO1	Apply fundamental concepts of requirements engineering and Analysis Modeling	PO1, PO2, PO3, PO4, PO5, PO11, PSO1	3	C, P
CO2	Apply the concepts of requirement engineering for collection of requirements set of the software system	PO1, PO2, PO3, PO4, PO5, PO6, PO11, PSO1	3	C, P
CO3	Apply different design techniques for the efficient software development	PO1, PO2, PO3, PO4, PO5, PO6, PO11, PSO1	3	C, P
CO4	Apply various testing techniques and test cases in the program code to test it thoroughly.	PO1, PO2, PO3, PO4, PO5, PO6, PO11, PSO1	3	C, P
CO5	Apply various maintenance techniques after the delivery of the software to the customer.	PO1, PO2, PO3, PO4, PO5, PO6, PO11, PSO1	3	C, P

Faculty Members Teaching the Course	Signature
1. Dr. Sapna Juneja	

Signature of Course Coordinator


Assoc. Head DOC


Signature of Addl. HoD


Signature of HoD


Please Note (Reference: OBE Guidelines wef. Session 2021 – 22)

- ❖ The strength of correlation between COs and POs/ PSOs/APOs should be represented as 1 (low correlation), 2 (medium correlation) and 3 (high correlation) in CO - PO/APO/PSO Matrix.
- ❖ If there is no correlation, then put a "-" (dash).

KIET Group of Institutions, Delhi – NCR, Ghaziabad

Department of CSE(AI&ML)

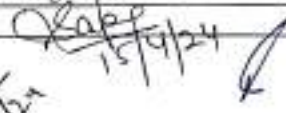
Program Name: B.Tech
Course Name: Software Engineering (DE-3)

Academic Session: 2023-24
Course Code: KOE-064

Year: 2024
Semester: VI
Course Coordinator Name: Dr. Sapna Juneja

CO - PO/PSO/APO Matrix

CO No.	Programme Outcome (PO)												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	3	3	3	2	-	-	-	-	-	3	-	2	-
CO2	3	3	3	3	2	-	-	-	-	-	3	-	2	-
CO3	3	3	3	3	2	-	-	-	-	-	3	-	2	-
CO4	3	3	3	3	2	-	-	-	-	-	3	-	2	-
CO5	3	3	3	3	2	-	-	-	-	-	3	-	2	-
PO Target	3	3	3	3	2	-	-	-	-	-	3	-	2	-

Faculty Members Teaching the Course	Signature
1. Dr. Sapna Juneja	

Signature of Course Coordinator

Assoc./ Asst. Prof. DOC

Signature of Addl. HoD

Signature of HoD

Please Note (Reference: OBE Guidelines wef. Session 2021 – 22)

- ❖ The strength of correlation between COs and POs/ PSOs/APOs should be represented as 1 (low correlation), 2 (medium correlation) and 3 (high correlation) in CO - PO/APO/PSO Matrix.
- ❖ If there is no correlation, then put a "-" (dash).

KIET Group of Institutions, Delhi – NCR, Ghaziabad

Department of CSE(AI&ML)

Program Name: B.Tech

Academic Session: 2023-24

Year:2024

Semester: VI

Course Name: Object Oriented Programming (OE-1)

Course Code: KOE-064

Course Coordinator Name: Mr. Laxman Singh

Course Outcomes

After completion of the course, the student will be able to		Relevant POs/ PSOs/ APOs	Revised Bloom's Level (BL)	Knowledge Category (KC)
CO No.	Statement of Course Outcome			
CO1	Understand the Basic concept of Object Orientation, object identity and Encapsulation.	PO1, PO2,	2	F, C
CO2	Understand the Basic concept of Basic Structural Modeling.	PO1, PO2, PO3, PO4, PO5, PSO1	2	F, C
CO3	Apply object-oriented design and analysis in real Life problems.	PO1, PO2, PO3, PO4, PO5, PSO1	4	F, C
CO4	Understand the basics of Objects and classes in C++ & Implement the feature of Object-oriented programming.	PO1, PO2, PO3, PO4, PO5, PSO1	3	C, P
CO5	Code structure model using C++.	PO1, PO2, PO3, PO4, PO5, PSO1	3	C, P

Faculty Members Teaching the Course	Signature
1. Mr. Laxman Singh	

Signature of Course Coordinator
18/04/2024

Assoc./ Asst. Head DOC
18/04/2024

Signature of Addl. HoD
18/04/2024

Signature of HoD

Please Note (Reference: OBE Guidelines wef. Session 2021 – 22)

- ❖ The strength of correlation between COs and POs/ PSOs/APOs should be represented as 1 (low correlation), 2 (medium correlation) and 3 (high correlation) in CO - PO/APO/PSO Matrix.
- ❖ If there is no correlation, then put a "-" (dash).

KIET Group of Institutions, Delhi – NCR, Ghaziabad

Department of CSE(AI&ML)

Program Name: B.Tech

Academic Session: 2023-24

Year: 2024

Semester: VI

Course Name: Object Oriented Programming (OE-1)

Course Code: KOE-064

Course Coordinator Name: Mr. Laxman Singh

CO - PO/PSO/APO Matrix

CO No.	Programme Outcome (PO)												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	2	-	-	-	-	-	-	-	-	-	-	-	-
CO2	2	2	2	1	2	-	-	-	-	-	-	-	2	-
CO3	2	2	2	2	2	-	-	-	-	-	-	-	2	-
CO4	3	2	2	2	2	-	-	-	-	-	-	-	1	-
CO5	2	2	2	2	2	-	-	-	-	-	-	-	2	-
PO Target	2.2	2	2	1.75	2	-	-	-	-	-	-	-	1.75	-

Faculty Members Teaching the Course	Signature
1. Mr. Laxman Singh	

Signature of Course Coordinator

Assoc. Asst. Head DOC

Signature of Addl. HoD

Signature of HoD

Please Note (Reference: OBE Guidelines wef. Session 2021 – 22)

- ❖ The strength of correlation between COs and POs/ PSOs/APOs should be represented as 1 (low correlation), 2 (medium correlation) and 3 (high correlation) in CO - PO/APO/PSO Matrix.
- ❖ If there is no correlation, then put a "-" (dash).

KIEIT Group of Institutions, Delhi – NCR, Ghaziabad

Department of CSE(AI&ML)

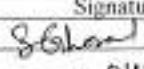
Program Name: B.Tech
Course Name: Machine Learning Lab

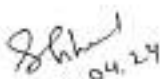
Academic Session: 2023-24
Course Code: KAI-651

Year: 2024 Semester: VI
Course Coordinator Name: Dr. Sayani Ghosal

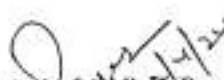
Course Outcomes

After completion of the course, the student will be able to		Relevant POs/ PSOs/ APOs	Revised Bloom's Level (BL)	Knowledge Category (KC)
CO No.	Statement of Course Outcome			
CO1	Understand complexity of Machine Learning algorithms and their limitations	PO1, PO2, PO3, PO4, PO5, PSO2	2	C,P
CO2	Perform experiments in Machine Learning using real-world data	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO12, PSO2	3	P
CO3	Apply common Machine Learning algorithms in practice and implementing their own	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO12, PSO2	3	P

Faculty Members Teaching the Course	Signature
1. Dr. Sayani Ghosal	 10.04.24


Signature of Course Coordinator


Assoc./ Asst. Head DOC


Signature of Asst. Head


Signature of HoD

Please Note (Reference: OBE Guidelines wef. Session 2021 – 22)

- ❖ The theory courses/ project having credits 3 to 6 should have 5 number of COs. The laboratory course/ mini project/ seminar/ industrial training having credits less than 3 should have 3 number of COs. The Project having 7 to 12 credits should have 6 to 10 number of COs.
- ❖ The statement of a CO must be formed considering a proper structure having mandatory and optional parts. The mandatory parts are Action & Knowledge and optional parts are Condition and Criteria

KIET Group of Institutions, Delhi – NCR, Ghaziabad

Department of CSE(AI&ML)

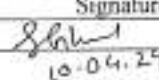
Program Name: B.Tech
Course Name: Machine Learning Lab

Academic Session: 2023-24
Course Code: KAI-651

Year: 2024 Semester: VI
Course Coordinator Name: Dr. Sayani Ghosal

CO - PO/PSO/APO Matrix

CO No.	Programme Outcome (PO)												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	2	2	1	2	2	-	-	-	-	-	-	-	-	2
CO2	2	2	2	2	3	2	-	1	-	-	-	2	-	3
CO3	2	2	2	2	3	2	1	2	2	-	-	2	-	3
PO Target	2	2	1.67	2	2.67	2	1	1.5	2	-	-	2	-	2.67

Faculty Members Teaching the Course	Signature
1. Dr. Sayani Ghosal	 10.04.24


Signature of Course Coordinator


Assoc. Asst. Head DOC


Signature of Addl. HoD


Signature of HoD

Please Note (Reference: OBE Guidelines wef. Session 2021 – 22)

- ❖ The strength of correlation between COs and POs/ PSOs/APOs should be represented as 1 (low correlation), 2 (medium correlation) and 3 (high correlation) in CO - PO/APO/PSO Matrix.
- ❖ If there is no correlation, then put a "-" (dash).

KIET Group of Institutions, Delhi – NCR, Ghaziabad

Department of CSE(AI&ML)

Program Name: B.Tech
Course Name: Web Technology Lab
Course Outcomes

Academic Session: 2023-24
Course Code: KCS-652

Year:2024 Semester: VI
Course Coordinator Name: Ms. Gargi Singh

CO No.	Statement of Course Outcome	Relevant POs/ PSOs/ APOs	Revised Bloom's Level (BL)	Knowledge Category (KC)
CO1	Implement static web pages using HTML, CSS, and java script.	PO1, PO2, PO3, PO4, PO5, PO12, PSO2	3	C, P
CO2	Implement dynamic web page using server-side programming JSP.	PO1, PO2, PO3, PO4, PO5, PO12, PSO2	3	C, P
CO3	Design server-side applications using JDBC, ODBC and session tracking API	PO1, PO2, PO3, PO4, PO5, PO12, PSO2	4	C, P

Faculty Members Teaching the Course	Signature
Ms. Gargi Singh	

Signature of Course Coordinator

Assoc. Asst. Head DOC

Signature of Addl. HoD

Signature of HoD

Please Note (Reference: OBE Guidelines wef. Session 2021 – 22)

- ❖ The strength of correlation between COs and POs/ PSOs/APOs should be represented as 1 (low correlation), 2 (medium correlation) and 3 (high correlation) in CO - PO/APO/PSO Matrix.
- ❖ If there is no correlation, then put a "-" (dash).

KIET Group of Institutions, Delhi – NCR, Ghaziabad

Department of CSE(AI&ML)

Program Name: B.Tech
Course Name: Web Technology Lab
CO - PO/PSO/APO Matrix

Academic Session: 2023-24
Course Code: KCS-652

Year:2024 Semester: VI
Course Coordinator Name: Ms. Gargi Singh

CO No.	Programme Outcome (PO)												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	3	3	3	3	-	-	-	-	-	-	3	-	3
CO2	3	3	3	-	3	-	-	-	-	-	-	2	-	3
CO3	3	3	3	-	3	-	-	-	-	-	-	3	-	3
PO Target	3	3	3	3	3	-	-	-	-	-	-	2.6	-	3

Faculty Members Teaching the Course	Signature
L. Ms. Gargi Singh	

Signature of Course Coordinator

Assoc. Head DOC

Signature of Addl. HoD

Signature of HoD

Please Note (Reference: OBE Guidelines wef. Session 2021 – 22)

- ♦ The strength of correlation between COs and POs/ PSOs/APOs should be represented as 1 (low correlation), 2 (medium correlation) and 3 (high correlation) in CO - PO/APO/PSO Matrix.
- ♦ If there is no correlation, then put a "-" (dash).

KIE Group of Institutions, Delhi – NCR, Ghaziabad

Department of CSE(AI&ML)

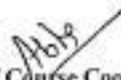
Program Name: B.Tech
Course Name: Computer Networks Lab
Course Outcomes

Academic Session: 2023-24
Course Code: KCS-651

Year:2024 Semester: VI
Course Coordinator Name: Dr. Abha Kiran Rajpoot

After completion of the course, the student will be able to		Relevant POs/ PSOs/ APOs	Revised Bloom's Level (BL)	Knowledge Category (KC)
CO No.	Statement of Course Outcome			
CO1	Understand the fundamental concepts of computernetworking and Network topologies.	PO1, PO2, PO3, PO4,PO5,PO6, PO11, PO12, PSO1	2	F, C
CO2	Analyze different types of network devices and simplecomputer networks.	PO1, PO2, PO3, PO4, PO5, PO8, PO9, PO11, PO12, PSO1	3	C, P
CO3	Implement the basic network commands and use techniques, skills, and modern networking tools necessary for engineering practice.	PO1, PO2, PO3, PO5, PO6, PO7, PO8, PO10, PO11, PO12, PSO1	3	C, F

Faculty Members Teaching the Course	Signature
1. Dr. Abha Kiran Rajpoot	


Signature of Course Coordinator


Assoc./ Asst. Head DOC


Signature of Addl. HoD


Signature of HoD

Please Note (Reference: OBE Guidelines wef. Session 2021 – 22)

- ✦ The strength of correlation between COs and POs/ PSOs/APOs should be represented as 1 (low correlation), 2 (medium correlation) and 3 (high correlation) in CO - PO/APO/PSO Matrix.
- ✦ If there is no correlation, then put a "-" (dash).

KIE Group of Institutions, Delhi – NCR, Ghaziabad

Department of CSE(AI&ML)

Program Name: B.Tech

Academic Session: 2023-24

Year:2024 Semester: VI

Course Name: Computer Networks Lab

Course Code: KCS-603

Course Coordinator Name: Dr. Abha Kiran Rajpoot

CO - PO/PSO/APO Matrix

CO No.	Programme Outcome (PO)												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	1	1	1	2	2	-	-	-	-	2	1	2	1	-
CO2	1	2	2	2	1	-	-	2	1	-	1	2	1	-
CO3	1	2	2	-	2	2	1	2		2	1	1	1	-
PO Target	1	1.6	1.6	2	1.6	2	1	2	1	2	1	1.6	1	-

Faculty Members Teaching the Course	Signature
1. Dr. Abha Kiran Rajpoot	

 Signature of Course Coordinator

 Assoc./ Asst. Head DOC

 Signature of Addl. HoD

 Signature of HoD

Please Note (Reference: OBE Guidelines wef. Session 2021 – 22)

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- ♦ If there is no correlation, then put a “-” (dash).

KIET Group of Institutions, Delhi – NCR, Ghaziabad

Department of CSE(AI&ML)

Program Name: B.Tech.

Academic Session: 2023-24

Year: 2024

Semester: VI

Course Name: Indian Traditions, Cultural and Society Course Code: KNC-602

Course Coordinator Name: Ms. Ruchika Mavis Daniel

Course Outcomes

After completion of the course, the student will be able to		Relevant POs/ PSOs/ APOs	Revised Bloom's Level (BL)	Knowledge Category (KC)
CO No.	Statement of Course Outcome			
CO1	Identify and understand the roots and details of Society State and Polity in India.	PO6, PO7, PO8, PO9, PO10, PO12	2	F
CO2	Understand the importance of Indian Literature, Culture, Tradition, Practices.	PO6, PO7, PO8, PO9, PO10, PO12	2	F
CO3	Explain the Indian Religion, Philosophy, Practices and in shadow of Pre-Vedic and Vedic Religion, Buddhism, Jainism, Six System Indian Philosophy.	PO6, PO7, PO8, PO9, PO10, PO12	2	F
CO4	Illustrate the Science, Management and Indian Knowledge System.	PO6, PO7, PO8, PO9, PO10, PO12	2	F,C
CO5	Understand the Indian Architect, Engineering, and Architecture in Ancient India. Indian's Cultural Contribution to the World environment in Arts and Cultural.	PO6, PO7, PO8, PO9, PO10, PO12	2	F,C

Faculty Members Teaching the Course

Signature

1. Ms. Ruchika Mavis Daniel

Ruchika 10/12/24

Signature of Course Coordinator

Assoc./ Asst. Head DOC

Signature of Asst. HoD

Signature of HoD

Please Note (Reference: OBE Guidelines wef. Session 2021 – 22)

- ❖ The theory courses/ project having credits 3 to 6 should have 5 number of COs. The laboratory course/ mini project/ seminar/ industrial training having credits less than 3 should have 3 number of COs. The Project having 7 to 12 credits should have 6 to 10 number of COs.
- ❖ The statement of a CO must be formed considering a proper structure having mandatory and optional parts. The mandatory parts are Action & Knowledge and optional parts are Condition and Criteria.

Department of CSE(AI&ML)

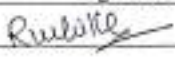
Program Name: B.Tech.
Course Name: Indian Traditions, Cultural and Society

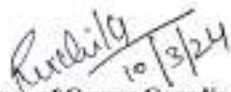
Academic Session: 2023-24
Course Code: KNC-602

Year: 2024
Semester: VI
Course Coordinator Name: Ms. Ruchika Mavis Daniel

CO - PO/PSO/APO Matrix

CO No.	Programme Outcome (PO)												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	-	-	-	-	-	2	2	2	2	2	-	2	-	-
CO2	-	-	-	-	-	2	2	2	2	2	-	2	-	-
CO3	-	-	-	-	-	2	2	2	2	2	-	2	-	-
CO4	-	-	-	-	-	2	2	2	2	2	-	2	-	-
CO5	-	-	-	-	-	2	2	2	2	2	-	2	-	-
PO Target	-	-	-	-	-	2	2	2	2	2	-	2	-	-

Faculty Members Teaching the Course	Signature
1. Ms. Ruchika Mavis Daniel	


Signature of Course Coordinator


Assoc./ Assoc. Head DOC


Signature of Addl. HoD


Signature of HoD

Please Note (Reference: OBE Guidelines w.r. Session 2021 – 22)

❖ The strength of correlation between COs and POs/ PSOs/APOs should be represented as 1 (low correlation), 2 (medium correlation) and 3 (high correlation) in CO - PO/APO/PSO Matrix.

❖ If there is no correlation, then put a “-” (dash).