

Nagindas Khandwala College (Autonomous)

Affiliated to University of Mumbai



**MKES's Nagindas Khandwala College (Autonomous),
Gate No 5, Bhavishya Bharat Campus, S. V. Road, Malad (West)
Mumbai-400 064**

Programme Code: USCS

Bachelor of Science in Computer Science (B.Sc.CS)

Three Year Integrated Programme -

Six Semesters

Course Structure

Under Choice Based Credit, Grading and Semester System

Implemented during Academic Year- 2020-2021


PRINCIPAL

**NAGINDAS KHANDWALA COLLEGE OF COMMERCE
ARTS & MANAGEMENT STUDIES AND SHANTABEN
NAGINDAS KHANDWALA COLLEGE OF SCIENCE
(AUTONOMOUS)
MALAD (W), MUMBAI - 400 064**



Nagindas Khandwala College (Autonomous)

Bachelor of Science in Computer Science (B. Sc. CS) Programme

Under Choice Based Credit, Grading and Semester System

Curriculum Framework

(Implemented during Academic year 2020-2021)

FIRST YEAR

Sr. No.	Semester I	Subject code	Credits	Sr. No.	Semester II	Subject code	Credits
	<i>Ability Enhancement Compulsory Course (AECC)</i>				<i>Ability Enhancement Practical Compulsory Course (AECC)</i>		
1.	AECC-1 Communication Skills	2016UISCS	2	1	AECC-1 IT platforms, Tools and Practices	2026UISTP	2
	<i>Skill Enhancement Compulsory Course (SEC)</i>				<i>Skill Enhancement Compulsory Course (SEC)</i>		
2.	SEC-1 Web Programming I	2014UISWP	3	2.	SEC-2 Web Programming II	2024UISWP	3
	<i>Core Course (CC)</i>				<i>Core Course (CC)</i>		
3.	CC-1 Introduction to Programming	2011UISIP	3	3.	CC-4 Programming and Application Development in Python	2021UISPP	3
4.	CC-2 Fundamentals of Computers and Electronics	2012UISFC	3	4	CC-5 Object Oriented Programming	2022UISOO	3
5.	CC-3 Operating Systems	2013UISOS	3	5	CC-6 Database Management Systems I	2023UISDS	3
	<i>Discipline Specific Compulsory Course (DSC)</i>				<i>Discipline Specific Compulsory Course (DSC)</i>		
6.	DSC-1 Discrete Mathematics-I	2015UISDM	2	6.	DSC-2 Discrete Mathematics II	2025UISDM	2
	<i>Skill Enhancement Practical Compulsory Course (SEC)</i>				<i>Skill Enhancement Practical Compulsory Course (SEC)</i>		
7.	SEC-1 Web Programming I	2014UISPR	1	7.	SEC-2 Web Programming II	2024UISPR	1


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	<i>Core Course Practical (CC)</i>				<i>Core Course Practical (CC)</i>		
8.	CC-1 Introduction to Programming	2011UISPR	1	8.	CC-4 Programming and Application Development in Python	2021UISPR	1
9.	CC-2 Fundamentals of Computers and Electronics	2012UISPR	1	9.	CC-5 Object Oriented Programming	2022UISPR	1
10.	CC-3 Operating Systems	2013UISPR	1	10.	CC-6 Database Management Systems I	2023UISPR	1
	TOTAL		20		TOTAL		20



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SECOND YEAR

(Implemented during Academic year 2020-21).

Sr. No.	Semester III	Subject code	Credits	Sr. No.	Semester IV	Subject code	Credits
	Skill Enhancement Compulsory Course (SEC)				Skill Enhancement Compulsory Course (SEC)		
1	SEC-3 Core Java	2031UISCI	2	1	SEC-3 Design Patterns	2041UISDP	2
	Core Course (CC)				Core Course (CC)		
2	CC-7 Data Structures	2032UISDS	2	2	CC-7 Design and Analysis of Algorithms	2042UISDA	2
3	CC-8 Computer Networks	2033UISCN	2	3	CC-8 System Programming	2043UISSP	2
4	CC-9 Database Management Systems- II	2034UISDB	2	4	CC-9 Software Engineering	2044UISSE	2
	Discipline Specific Compulsory Course (DSC)				Discipline Specific Compulsory Course (DSC)		
5	Descriptive Statistics	2035UISST	2	5	Probability Theory	2045UISPT	2
	Discipline Specific Elective (DSE)				Discipline Specific Elective (DSE)		
	Discipline Specific Elective (DSE-1) (Any ONE of group A)				Discipline Specific Elective (DSE-1) (Any ONE of group A)		
6	Advanced Web Programming - I	2036UISAW	2	6	Advanced Web Programming - II	2046UISAW	2
7	Hybrid Mobile Application Development I	2036UISMD	2	7	Advanced Java	2046UISAJ	2
				8	Hybrid Mobile Application Development II	2046UISMD	2
	Discipline Specific Elective (DSE-1) (Any ONE of group B)				Discipline Specific Elective (DSE-1) (Any ONE of group B)		
8	Computer Graphics and Animation	2037UISCG	2	9	Multimedia Systems	2047UISMS	2
9	Embedded Systems	2037UISES	2	10	Internet of Things	2047UISIT	2
10	Theory of Computation I	2037UCSTC	2	11	Theory of Computation II	2047UCSTC	2
	Skill Enhancement Practical Compulsory Course (SEC)				Skill Enhancement Practical Compulsory Course (SEC)		
11	SEC-3 Core Java	2031UISPR	1	12	SEC-3 Design Patterns	2041UISPR	1



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	<i>Core Course Practical (CC)</i>				<i>Core Course Practical (CC)</i>		
12	CC-7 Data Structures	2032UISPR	1	13	CC-7 Design and Analysis of Algorithms	2042UISPR	1
13	CC-8 Computer Networks	2033UISPR	1	14	CC-8 System Programming	2043UISPR	1
14	CC-9 Database Management Systems- II	2034UISPR	1	15	CC-9 Software Engineering	2044UISPR	1
	<i>Discipline Specific Elective Practical (DSE)</i>				<i>Discipline Specific Elective Practical (DSE)</i>		
	Discipline Specific Elective Practical (DSE- 1) (Any ONE of group A)				Discipline Specific Elective Practical (DSE-1) (Any ONE of group A)		
15	Advanced Web Programming - I	2036UISAWPR	1	16	Advanced Web Programming - II	2046UISAWPR	1
				17	Advanced Java	2046UISAJPR	1
16	Hybrid Mobile Application Development I	2036UISMDPR	1	18	Hybrid Mobile Application Development II	2046UISMDPR	1
	Discipline Specific Elective Practical (DSE- 1) (Any ONE of group A)				Discipline Specific Elective Practical (DSE-1) (Any ONE of group A)		
17	Computer Graphics and Animation	2037UISCGR	1	19	Multimedia	2047UISMSPR	1
18	Embedded Systems	2037UISESPR	1	20	Internet of Things	2047UISITPR	1
19	Theory of Computation I	2037UISTCPR	1	21	Theory of Computation II	2047UISTCPR	1
	TOTAL		20		TOTAL		20



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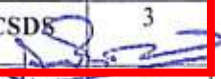

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THIRD YEAR

(Implemented during Academic year 2019-2020)

Sr No	Semester V	Subject code	Credits	Sr. No.	Semester VI	Subject code	Credits
	<i>Skill Enhancement Compulsory Course (SEC)</i>				<i>Skill Enhancement Compulsory Course (SEC)</i>		
1	SEC-3 Game Programming	1857UCSGP	2		SEC-4 Ethical Hacking	1867UCSEH	2
	<i>Discipline Specific Elective (DSE)</i>				<i>Discipline Specific Elective (DSE)</i>		
	Discipline Specific Elective (DSE-1) (Any TWO of group A)				Discipline Specific Elective (DSE-3) (Any TWO of group A)		
2	a. Artificial Intelligence	1851UCSAI	3		a. Architecting of IoT	1861UCSIT	3
3	a. Linux Server Administration	1852UCSLA	3		a. Cloud Computing	1862UCSCC	3
4	a. Software Testing and Quality Assurance	1853UCSST	3		a. Cyber Forensics	1863UCSCF	3
	Discipline Specific Elective (DSE-2) (Any TWO of group B)				Discipline Specific Elective (DSE-4) (Any TWO of group B)		
5	b. Information and Network Security	1854UCSNS	3		b. Information Retrieval	1864UCSIR	3
6	b. Wireless Sensor Networks and Mobile Communication	1855UCSWN	3		b. Digital Image Processing	1865UCSDP	3
7	b. Web Services	1856UCSWS	3		b. Data Science	1866UCSDS	3
	<i>Skill Enhancement Practical Compulsory Course (SEC)</i>				<i>Skill Enhancement Practical Compulsory Course (SEC)</i>		
8	SEC-3 Game Programming	1857UCSPR	1		SEC-5 Ethical Hacking	1867UCSPR	1


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9	SEC-4 Project Implementation	1858UCSPR	1	SEC-6 Project Implementation	1868UCSPR	1
	<i>Discipline Specific Elective Practical (DSE)</i>			<i>Discipline Specific Elective Practical (DSE)</i>		
	Discipline Specific Elective Practical (DSE-1) (Any <i>TWO</i> of group A)			Discipline Specific Elective Practical (DSE-3) (Any <i>one</i> of group A)		
	a. Artificial Intelligence	1851UCSPR	1	a. Architecting of IoT	1861UCSPR	1
	a. Linux Server Administration	1852UCSPR	1	a. Cloud Computing	1862UCSPR	1
	a. Software Testing and Quality Assurance	1853UCSPR	1	a. Cyber Forensics	1863UCSPR	1
	Discipline Specific Elective Practical (DSE-2) (Any <i>two</i> of group B)			Discipline Specific Elective Practical (DSE-4) (Any <i>two</i> of group B)		
	b. Information and Network Security	1854UCSPR	1	b. Information Retrieval	1864UCSPR	1
	b. Wireless Sensor Networks and Mobile Communication	1855UCSPR	1	b. Digital Image Processing	1865UCSPR	1
	b. Web Services	1856UCSPR	1	b. Data Science	1866UCSPR	1
	TOTAL		20	TOTAL		20



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