1.2.2 List of Programs offered through Choice Based Credit System (CBCS)/Electives Course System
Department of CSE-AI&DS

INDEX

Department of CSE-AI&DS
Minimum Credits to be earned: 160 (for Regular Students)
123 (for Lateral Entry Students)

S.No	Course Code	Course Name	POs	L	T	P	C
First Semester							
1	21HSX01	Communicative English	10, 12	2	-	-	2
2	21MAX01	Engineering Mathematics I	1	3	-	-	3
3	21PYX01 21CYX01	Engineering Physics / Engineering Chemistry	1 / 1	3/3	-	-	3/3
4	21BEX01 21BEX06	Basics of Engineering / IT Workshop	1,12/1,12	3/ -	-	-/ 3	3/1.5
5	21BEX02	Problem Solving and Programming Skills	1, 12	3	-	-	3
6	21BEX03	Problem Solving and Programming Skills Lab	4	-	-	3	1.5
7	21BEX04/ 21BEX05	Engineering Drawing / Engineering Workshop	1,5,10/1,9,10	-	-	3/3	1.5/1.5
8	21PYX02/ 21CYX02	Engineering Physics Lab /Engineering Chemistry Lab	4/4	-	-	3/3	1.5
9	21HSX02/-	Communicative English Lab/-	10,12	-	-	3/-	1.5/-
			Total	**14/11**	**-**	**12/12**	**20/17**
Second Semester							
1.		Language Elective	10,12	2	-	-	2
2.	21MAX02	Engineering Mathematics II	1	3	-	-	3
3.	21CYX01/ 21PYX01	Engineering Chemistry /Engineering Physics	1/1	3/3	-	-	3/3
4.	21BEX01/ 21BEX06	Basics of Engineering/ IT Workshop	1,12/1,12	-/3	-	3/-	1.5/3
5.	21BEX07	Python Programming	1,12	3	-	-	3
6.	21BEX08	Python Programming Lab	4	-	-	3	1.5
7.	21BEX05/ 21BEX04	Engineering Workshop / Engineering Drawing	1,9,10/1,5,10	-	-	3/3	1.5/1.5
8.	21CYX02/ 21PYX02	Engineering Chemistry Lab/Engineering Physics Lab	4/4	-	-	3/3	1.5/1.5
9.	-/21HSX02	-/Communicative English Lab	-/10,12	-	-	-/3	-/1.5
			Total	**11/14**	**-**	**12/12**	**17/20**
Third Semester							
1	21MA304	Probability and Statistics using Python	1,4, 12	3	-	2	4
2	21ML302	Artificial Intelligence	1,2,3	3	-	-	3
3	21CS303	Data Structures	1,2,12	3	-	-	3
4	21CS304	Digital Logic Design	1, 4	3	-	2	4
5	21DS305	Mathematical Foundation for Computer Science and Data Science	1,12,PSO1	3	-	-	3
6	21CS306	Object Oriented Programming with JAVA	1,2,3	3	-	-	3
7	21CS307	Data Structures Lab	2,3,4,5	-	-	3	1.5
8	21CS308	JAVA Lab	2,3,4,5	-	-	3	1.5
9	21BEA01	Environmental Studies	1,7	-	-	-	-
10	21ESX01	Employability Skills I	1,2,5,8,10, 12	0	-	2	-
11	21HSX11	CC & EC Activities I	6,7, 9,10	-	-	1	-
			Total	**18**	**-**	**13**	**23**

Fourth Semester							
1	21IT304	Database Management Systems	1,4,12	3	-	-	3
2	21IT403	Operating Systems	1,12	3	-	-	3
3	21CS403	Computer Organization and	1,12	3	-	-	3

		Architecture					
4	21CS404	Design and Analysis of Algorithms	2,3	3	-	2	4
5	21DS405	Foundations of Data Science	2, 3, PSO1, PSO2	3	-	-	3
6	21IT308	Database Management Systems Lab	4	-	-	3	1.5
7	21DS407	Foundations of Data Science Lab	4,5,8	-	-	3	1.5
8	21ESX01	Employability Skills I	1,2,5,8,10, 12	0	-	2	2
9	21HSX11	CC & EC Activities I	6,7, 9,10	-	-	1	1
			Total	**15**	**-**	**11**	**22**
		Fifth Semester					
1	21IT405	Web Technologies (Integrated)	3,5,PSO1	3	-	2	4
2	21DS502	Deep Learning for Data Science	1,2,4,5,12	3	-	-	3
3	21DS503	Data Analytics &Visualization Techniques (Integrated)	1,4,PSO1	3	-	2	4
4	21ML504	Computer Networks	1, 2,3	3	-	-	3
5		Elective I (Professional Elective)		3	-	-	3
6		Elective II (Open Elective I)		3	-	-	3
7	21DS507	Deep Learning Lab		-	-	3	1.5
8	21TPX01	Term Paper	1,4,10,12	-	-	3	1.5
9	21ESX02	Employability Skills II	1,2,5,8,10,12	0	-	2	-
10	21HSX12	CC & EC Activities II	6,7, 9,10	-	-	1	-
11	21SIX01	Summer Internship I	1,2,8,10,12	-	-	-	1
			Total	**18**	**-**	**12**	**24**
		Six Semester					
1.	21DS601	Optimization Techniques for ML	2,3,PSO1,PSO2	3	-	-	3
2.	21IT602	Automata and Compiler Design	1,2,3	3	-	-	3
3.	21CS603	Software Engineering	4,5,8,11, PSO1	3	-	-	3
4.		Elective III (Professional Elective)		3	-	2	4
5.		Elective IV (Open Elective II)		3	-	-	3
6.	21DS606	Optimization Techniques for ML Lab	4, 5	-	-	3	1.5
7.	21MPX01	Mini Project	4, 5,08	-	-	3	1.5
8.	21ESX02	Employability Skills II	All Pos & PSOs	0	-	2	2
9.	21HSX12	CC & EC Activities II	1,2,3,5,6,8,10,12	-	-	1	1
10.	21ATX01	Environmental Studies	6,7,9,10	-	-	-	-
11.	21ATX02	Professional Ethics and Human Values	1,7	-	-	-	-
12.	21ATX---	Audit Course	----	-	-	-	-
			12	**15**	**-**	**8**	**22**
		Seventh Semester					
1		Elective V (Professional Elective)		3	-	-	3
2		Elective VI (Professional Elective)		3	-	-	3
3		Elective VII (Open Elective III)		3	-	-	3
4		Summer Internship II	1,2,5,6,10,12	-	-	-	1
5		Project	All POs& PSOs	-	-	16	8
			Total	**9**	**-**	**16**	**18**
		Eighth Semester					
1		Elective VIII (Professional Elective)		-	-	-	3
2		Elective IX (Open Elective IV)		-	-	-	3
3	21FIX01	Full Semester Internship (FSI)	1,2,5,8,9,10, PSO1,PSO2	-	-	-	8
			Total	**6**	**-**	**-**	**14**

List of Electives

Language Electives

No.	Course Code	Course	POs	Contact Hours			
				L	T	P	C
1	21HSX03	Advanced Communicative English		2	-	-	2
2	21HSX04	Communicative German		2	-	-	2
3	21HSX05	Communicative French		2	-	-	2
4	21HSX06	Communicative Japanese	10,12	2	-	-	2
5	21HSX07	Communicative Spanish		2	-	-	2
6	21HSX08	Communicative Korean		2	-	-	2
7	21HSX09	Communicative Hindi		2	-	-	2

Elective I

Career Path I, II, III

No.	Course Code	Course	POs	L	T	P	C
1	**21MLC11**	**Computer Vision & Pattern Recognition**	1,3,PSO1,PSO2	3	-	-	3
2	**21CSC21**	**Web Programming Languages (Full Stack Developer)**	1,2,7,12	3	-	-	3
3	**21MLC31**	**Fundamentals of Cloud Computing**	2,6,7,8	3	-	-	3

Non-Career Path (Core Electives)

No.	Course Code	Course	POs	L	T	P	C
4	21CS004	Principles of Programming Languages	1, 2, 3, 4	3	-	-	3
5	21CS005	Mobile Computing	3, 8	3	-	-	3
6	21CS006	Distributed Operating Systems	1,2	3	-	-	3
7		MOOCs/Honors		3	-	-	3

Elective II: Open Elective I

No.	Course Code	Course	POs	L	T	P	C
1	21CE001	Disaster Management	2, 7	3	-	-	3
2	21EE001	Electrical Installation and Safety Measures	2,3,6,8	3	-	-	3
3	21DS001	Fundamentals of Data Science	3,PSO1,PSO2	3	-	-	3
4	21ME001	Fundamentals of Optimization Techniques	1, 2	3	-	-	3
5	21EC001	Sensors for Engineering Applications	1, 2	3	-	-	3
6	21CS001	Fundamentals of Artificial Intelligence **(Except CSE & IT)**	1, 2, 3	3	-	-	3
7	21IT001	Fundamentals of Multimedia	1, 5, 7	3	-	-	3

Elective III

Career Path I, II, III

No.	Course Code	Course	POs	L	T	P	C
1	**21MLC12**	**Machine Learning for Business Intelligence**	2,3,PSO1,PSO2	3	-	2	4
2	**21CSC22**	**Web Application Developments Framework (Full Stack Developer)**	1, 3,4	3	-	2	4
3	**21MLC32**	**Cloud Services using AWS**		3	-	2	4

Non-Career Path (Core Electives)

No.	Course Code	Course	POs	L	T	P	C
4	21CS007	Cloud Computing Essentials	2,5,6,7,8	3	-	2	4
5	21CS008	Cryptography and Network Security	3, 6,8	3	-	2	4

Elective IV: Open Elective II

No.	Course Code	Course	POs	L	T	P	C
1	21CE002	Air Pollution and Environmental Impact Assessment	6, 7,12	3	-	-	3
2	21EE002	Renewable Energy Sources	2, 7	3	-	-	3
3	21ME002	Principles of Entrepreneurship	1,11	3	-	-	3
4	21EC002	Electronics for Agriculture	1, 2	3	-	-	3
5	21CS002	Fundamentals of Machine Learning	2, 3	3	-	-	3
6	21CH002	Industrial Safety and Hazard Management	2, 6, 7,8	3	-	-	3
7	21IT002	Fundamentals of Cloud Computing	1, 7	3	-	-	3
8	21BS002	Advanced Numerical Techniques	1, 2	3	-	-	3
9	21BS003	Functional Materials and Applications	1, 2	3	-	-	3

Elective V

Career Path I, II, III

No.	Course Code	Course	POs	L	T	P	C
1	**21MLC13**	**Conversational AI**	1,2,4,12,PSO1	3	-	-	3
2	**21CSC23**	**Web Application Databases (Full Stack Developer)**	2,3	3	-	-	3
3	**21MLC33**	**Cloud Security Essentials**	2,3	3	-	-	3

Comment [s1]: Approved 1st BOS on 20-06-2022

Comment [s2]: Approved 1st BOS on 20-06-2022

Comment [s3]: Approved 1st BOS on 20-06-2022

Comment [s4]: Approved 1st BOS on 20-06-2022

Comment [s5]: Approved 1st BOS on 20-06-2022

Comment [s6]: Approved 1st BOS on 20-06-2022

Comment [s7]: Approved 1st BOS on 20-06-2022

Comment [s8]: Approved 1st BOS on 20-06-2022

Non-Career Path (Core Electives)

#	Code	Course		L	T	P	C
4	21IT008	Social Network Analysis	2, 4, 5	3	-	-	3
5	21CS011	Optimization Techniques	2, 3, 5	3	-	-	3
6	21CS012	Wireless Adhoc Networks	2, 3	3	-	-	3
7		MOOCs/Honors		3	-	-	3

Elective VI

#	Code	Course		L	T	P	C
1	21CS014	Green Computing	2,3,6,7	3	-	-	3
2	21CS015	Software Project Management	3,6	3	-	-	3
3	21CS016	Soft Computing	1,2,3,4	3	-	-	3
4		MOOCs/Honors		3	-	-	3

Elective VII: Open Elective III

#	Code	Course		L	T	P	C
1	21CE003	Solid Waste Management	2,3,12	3	-	-	3
2	21EE003	Fundamentals of Electrical Vehicle Technology	2,3,12	3	-	-	3
3	21ME003	Industrial Engineering and Management	1,11	3	-	-	3
4	21EC003	Interfacing and Programming with Arduino	1,2	3	-	-	3
5	21CS003	Data Science for Engineering Applications	2,3,4	3	-	-	3
6	21CH003	Industrial Ecology for Sustainable Development	2,6,7	3	-	-	3
7	21IT003	Fundamentals of Mobile Computing	1,7	3	-	-	3
8	21BS004	Advanced Materials of Renewable Energy	1,7	3	-	-	3
9	21BS005	Applied Linear Algebra for Engineers	1,12	3	-	-	3

Elective VIII: Professional Elective

#	Code	Course		L	T	P	C
1	21CS017	Fundamentals of Social Network Analysis	2, 4,5	-	-	-	3
2	21CS018	Information Retrieval Systems	1,2,3,4	-	-	-	3
3	21CS019	Fundamentals of Devops	1,3, 5,8,10	-	-	-	3
4		MOOCs/Honors		-	-	-	3

Elective IX: Open Elective IV

#	Code	Course		L	T	P	C
1	21CE019	Green Buildings	2,3,4,5,7	-	-	-	3
2	21EE017	Sustainable Energy	1,2,12	-	-	-	3
3	21ME004	Total Quality Management	1,11	-	-	-	3
4	21EC011	Communication Technologies	1,2	-	-	-	3
5	21CS020	Applications of Artificial Intelligence	2,3,6,7	-	-	-	3
6	21CH016	Green Technologies	1,6,7	-	-	-	3
7	21IT015	Human Computer Interaction	1,7	-	-	-	3
8	21BS006	Handling of Industrial Waste and Wastewater	1,7	-	-	-	3

Audit Course

#	Code	Course		L	T	P	C
1	21AT001	Communication Etiquette in Workplaces	-	-	-	-	-
2	21AT002	Contemporary India: Economy, Policy andSociety	-	-	-	-	-
3	21AT003	Design The Thinking	-	-	-	-	-
4	21AT004	Ethics and Integrity	-	-	-	-	-
5	21AT005	Indian Heritage and Culture	-	-	-	-	-
6	21AT007	Intellectual Property Rights and Patents	-	-	-	-	-
7	21AT008	Introduction to Journalism	-	-	-	-	-
8	21AT009	Mass Media Communication	-	-	-	-	-
9	21AT010	Science, Technology and Development	-	-	-	-	-
10	21AT011	Social Responsibility	-	-	-	-	-
11	21AT012	The Art of Photography and Film Making	-	-	-	-	-
12	21AT013	Gender Equality for Sustainability	-	-	-	-	-
13	21AT014	Women in Leadership	-	-	-	-	-
14	21AT015	Introduction to Research Methodology	-	-	-	-	-
15	21AT016	Climate Change and Circular Economy	-	-	-	-	-

B. Tech. (Honors)

Domain I (Data Engineering)

#	Code	Course		L	T	P	C
01	21CSH11	Advanced Data Structures	2,3,4	4	-	-	4
02	21CSH12	Advanced Databases	2,3,4	4	-	-	4

Comment [s9]: Approved 1st BOS on 20-06-2022

Comment [s10]: Approved 1st BOS on 20-06-2022

Comment [s11]: Approved 1st BOS on 20-06-2022

Comment [s12]: Approved 1st BOS on 20-06-2022

Comment [s13]: Approved 1st BOS on 20-06-2022

03	21CSH13	Programming, Data Structures and Algorithms Using Python	2,3,4,5	4	-	-	4
04	21CSH14	Bioinformatics	2,3	4	-	-	4
Domain II (Modern Software Engineering)							
01	21CSH21	DevOps	1,3,5,8,10	4	-	-	4
02	21CSH22	Design Patterns	2,3	4	-	-	4
03	21CSH23	Advanced Software Engineering	1,3,4, PSO1	4	-	-	4
04	21CSH24	Robotic Process Automation	3,5, 8, PSO2	4	-	-	4
Domain III (Security)							
01	21CSH31	Fundamentals of Systems Security	1,2	4	-	-	4
02	21CSH32	Python Programming for Security	2,3,4	4	-	-	4
03	21CSH33	Management of Information Security	3,6,7	4	-	-	4
04	21CSH34	Computer Forensics	2,3	4	-	-	4
Domain IV (User Interface Design)							
01	21CSH41	Computer Graphics	1,2,3,4	4	-	-	4
02	21CSH42	Multimedia Systems	3,4	4	-	-	4
03	21CSH43	Human Computer Interaction	2,3	4	-	-	4
04	21CSH44	Mobile Programming	3,4	4	-	-	4

B. Tech. (Minors)							
Energy Science & Technology							
01	21CHM11	Foundation of Energy Science and Technology	1,2,3,5,7,12	4	-	-	4
02	21CHM12	Energy Generation from Waste	1,2,3,4,5	4	-	-	4
03	21CHM13	Energy Storage Systems	1,2,3,6,7	4	-	-	4
04	21CHM14	Hydrogen Energy and Fuel Cells	1,2,3,7	4	-	-	4
Nano Science & Technology							
01	21CHM21	Introduction and Characterization of Nano Materials	1,2,3,7	4	-	-	4
02	21CHM22	Carbon Nanostructures and Applications	1,3,4,5	4	-	-	4
03	21CHM23	Energy, Environment & Biomedical Nanotechnology	1,2,3,7	4	-	-	4
04	21CHM24	Industrial Applications of Nano Technology	2,3,5,,7	4	-	-	4
Environmental Engineering							
01	21CEM11	Watershed Management	6,7	4	-	-	4
02	21CEM12	Industrial Pollution Control and Engineering	3,6,7,12	4	-	-	4
03	21CEM13	Solid and Hazardous Waste Management	1,3,6,7	4	-	-	4
04	21CEM14	Ecology and Environmental Assessment	1,3,6,7	4	-	-	4
Artificial Intelligence & Machine Learning							
01	21CSM11	Fundamentals of AI & Machine Learning	1,12	4	-	-	4
02	21CSM12	Feature Engineering for Machine Learning	1,2,3	4	-	-	4
03	21CSM13	Exploratory Data Analytics	1,4	4	-	-	4
04	21CSM14	Foundations of Deep Learning	1,2, 4	4	-	-	4
Cyber Security							
01	21CSM21	Fundamentals of Security	1,2	4	-	-	4
02	21CSM22	Management of Information Security	3,6,7	4	-	-	4
03	21CSM23	Cyber Security	1,3,4	4	-	-	4
04	21CSM24	Fundamentals of Cloud Security	2,3	4	-	-	4
Data Science & Analytics							
01	21CSM31	Data Cleaning	2,3,4	4	-	-	4
02	21CSM32	Data Engineering	1,2,3,4	4	-	-	4
03	21CSM33	Text Analytics	1,2,4	4	-	-	4
04	21CSM34	Social Network and Semantic Analysis	2, 4	4	-	-	4
Computer Systems Programming							
01	21CSM41	Programming Fundamentals	1,2,3	4	-	-	4
02	21CSM41	Data Structures & Algorithms	1,2,3,4	4	-	-	4
03	21CSM41	Fundamentals of Databases	1,4	4	-	-	4
04	21CSM41	Fundamentals of Computer Networks & Operating Systems	1,2,3	4	-	-	4

Digital IC Design

01	21ECM11	Fundamentals of VLSI Design	1,2,3	4	-	-	4
02	21ECM12	Digital Design using HDL	1,2,3	4	-	-	4
03	21ECM13	FPGA Technology	1,2	4	-	-	4
04	21ECM14	Analog and Mixed Signal Design	1,2	4	-	-	4

Industrial Automation

01	21ECM21	Microcontrollers and Interfacing	1,2,3	4	-	-	4
02	21ECM22	Sensors and Data Acquisition System	1,2	4	-	-	4
03	21ECM23	Fundamentals of Labview	1,2	4	-	-	4
04	21ECM24	Medical Robotics	1,2,3	4	-	-	4

Communicationsand Networking

01	21ECM31	Principles of Communications	1,2	4	-	-	4
02	21ECM32	Coding Theory and Practice	1,2	4	-	-	4
03	21ECM33	Ad-hoc and Wireless Sensor Networks	1,2,3	4	-	-	4
04	21ECM34	Fundamentals of Multimedia Networking	1,2,3	4	-	-	4

Avionics

01	21ECM41	Principles of Aerodynamics	1,2	4	-	-	4
02	21ECM42	Aircraft Electrical Systems	1,2	4	-	-	4
03	21ECM43	Aircraft Instrument Systems	1,2	4	-	-	4
04	21ECM44	Aircraft Communication and Navigational Systems	1,2	4	-	-	4

Geographic Information System

01	21ECM51	Sensors and Sensing Technology	1,2	4	-	-	4
02	21ECM52	Geographic Information Systems	1,2	4	-	-	4
03	21ECM53	Digital Image Processing	1,2	4	-	-	4
04	21ECM54	Lidar Systems	1,2	4	-	-	4

Electric Vehicles Technology

01	21EEM11	Introduction to Electric Vehicles Technologies	2,3	4	-	-	4
02	21EEM12	Electrical Drives and Controllers for Electric Vehicles	2,3	4	-	-	4
03	21EEM13	Charging Technology in Electric Vehicles	2,3	4	-	-	4
04	21EEM14	Computer Vision in Electric Vehicles	2,3	4	-	-	4

Electric Vehicles Technology

01	21EEM21	Fundamentals of Smart City	2,3	4	-	-	4
02	21EEM22	Smart City Infrastructure	2,3	4	-	-	4
03	21EEM23	Computational Methods for Smart City Management	2,3	4	-	-	4
04	21EEM24	Communication Technologies and Mobility for Smart City	2,3	4	-	-	4

Electric Vehicles Technology

01	21EEM31	Modelling and Simulations of Industrial Applications	2,3	4	-	-	4
02	21EEM32	Industrial Sensors and Actuators	2,3	4	-	-	4
03	21EEM33	Programmable Logic Controllers	2,3	4	-	-	4
04	21EEM34	Control Design for Industrial Applications	2,3	4	-	-	4

Cloud Application Development

01	21ITM11	Introduction to Cloud Computing	6, 7, 12	4	-	-	4
02	21ITM12	Introduction to Web Development with HTML, CSS, JavaScript	1, 2, 3, 9, 12	4	-	-	4
03	21ITM13	Developing Cloud Native Applications	5, 8, 10	4	-	-	4
04	21ITM14	Developing Cloud Apps with Node.js and React	5, 8, 10	4	-	-	4

Robotics and Automation

01	21MEM11	Introduction to Robotics	1,2,3	4	-	-	4
02	21MEM12	Drives and Sensors	1,2,3,4	4	-	-	4
03	21MEM13	Control Systems for Robotics	1,2,3,4	4	-	-	4
04	21MEM14	Machine Learning for Robotics	2,5	4	-	-	4

Industrial Systems Engineering

01	21MEM21	Industrial Management	1,10,11,12	4	-	-	4
02	21MEM22	Fundamentals of Operations Research	1,2,3,5	4	-	-	4
03	21MEM23	Enterprise Resource Planning	1,2,3,5,11,12	4	-	-	4
04	21MEM24	Production Planning and Control	1,2,3,5,11,12	4	-	-	4

Department of Computer Science & Engineering
Specialization in CSE- Artificial Intelligence & Data Science (CSE- AIDS)

1st BOS - MINUTES OF MEET

Person in Chair: Dr A Venkata Ramana, HoD CSE, GMRIT

Dated: 20.06.2022 (Monday)

Venue: Online Teams

Time(s): 03.00 PM TO 4.30 PM

S.No	Points Discussed	Remarks
1	**Agenda:** ➢ Review of the Curriculum and Course Titles of AR21 Academic Regulation. ➢ Review of Titles and Syllabus of 3rd and 4th Semester Curriculum under AR2. ➢ Finalization of Course Titles of Electives under Academic Regulations 2021. ➢ Review of B.Tech Honors & Minors. ➢ Any Other Item	
	• Preamble and the context is set for the 1st BOS Meeting by the Principal Dr CLVRSV Prasad requesting the Academia/ Alumni and Industry to suggest in designing the best, distinct-industry driven curriculum for the specialization course CSE-AIDS. • HOD CSE welcomed all the Experts of Academia / Industry and Alumni for today's 1st-BOS Meet by throwing some glimpse on the AR21 Course Structure, Career Paths and 3rd and 4th Sem Syllabus.	
2	**AIDS Curriculum:** a) External BOS Members suggested to have syllabus revision only for the upcoming year (upto 2nd Year now) in advance for BOS meetings, as these specializations are emerging trends and need revision on timely basis. b) Suggested to add the concern POs and PSOs applicable for the core courses of the stream.	

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		c) Suggested to have No Subjects in 8th Semester as per JNTUK Norms. d) Suggested to have Seminar/ Project/ Internship in the 8th Semester e) Suggested not to have any courses under MOOCs, except from Swayam/ NPTEL Platform, not exceeding more than 6 Credits. f) Suggested to add a mandate course in the Curriculum, i.e., Universal Human Values II- 3 Credit Course.(Reference Link is Given)	
3		**IIIrd Semester Subjects:** a) Fundamentals of Artificial Intelligence b) Statistical Analysis using Python c) Data Structures d) Digital Logic Design e) Object Oriented through Java	Syllabus is Good and Fine.
		Mathematical Foundation for Data Science: • Needed thorough changes, syllabus seems to look like discrete mathematics. The syllabus should show focus more on distribution components- Normal Distribution and Poisons Distribution.	Suggested for a revision.
4		**IVth Semester Subjects:** • Database Management Systems • Operating Systems • Computer Architecture and Organization • Design and Analysis of Algorithms	Syllabus is Good and Fine.
		Foundation of Data Science: • Needed thorough changes. • Focus more on statistical component needed for Data Science. • Suggested to add, worlds famous algorithm for data science Grade Boosting Algorithm.	Suggested for a revision.
5		**Other Items Discussed:** a) Observed 30% of Changes from CSE Curriculum w.r.t CSE-AIDS Curriculum b) External BOS Members informed to add Statistical Components as much as possible. c) Thoroughly check the Credit Balancing Component as suggested by AICTE (in LTPC structure).	

| | d) Credit is completely based on Weekly Contact Hours. Tutorials also should carry credit, if included in the Course Structure.
e) Display of all the career path courses as needed and took suggestions.
f) Suggested to go through syllabus from web sites of IITK & IIT Roorkee.
g) Suggested to go through this Reference Link:
https://docs.google.com/viewer?a=v&pid=sites&srcid= am50dWNlay5hYy5pbnxqbnR1Y2VrX3ZpY2UtcHJpbmNpcGFsfGd4OjZhNDQyY2RhZmI4ZDNiN2E | |

Prepared By:

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Board Chairman- HOD- CSE

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