

Five Years Integrated M.Sc. Data Science


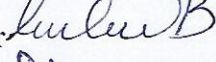
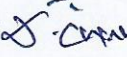


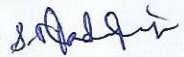
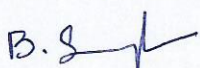
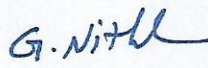

Meeting on Consolidated Curriculum Review based on Feedback from Stake holders

11-04-2023

Meeting Date : 10-04-2023 3:30 pm to 4:30 pm

Meeting Venue: Data Science Laboratory

Members Present:

- | | |
|--|---|
| 1. Dr. S. Parthasarathy/HoD  | 6. Mr. B. Ramprakash/Asst. Professor  |
| 2. Dr. T. Chandrakumar/Associate Professor  | 7. Ms. P. Sharmila/ Asst. Professor  |
| 3. Dr. D. Anitha/ Asst. Professor (Sel. Grade)  | 8. Ms. S.T. Padmapriya/ Asst. Professor  |
| 4. Ms. B. Surya Devi/ Asst. Professor  | 9. Ms. G. Nithyakala/ Asst. Professor  |
| 5. Ms. R. Saraswathi Meena/Asst. Professor  | |

Meeting Minutes

Stakeholders : Students, Course handling faculty & MCA Alumni

Syllabus reviewed: M.Sc. Data Science 2019 Curriculum

Based on the analysis of curriculum review feedback obtained from students, course handling faculty members, MCA Alumni, the following points are considered for the review of curriculum and will be placed in the forthcoming Board of Studies on 19th April 2023.

Action taken based on the feedback review for curriculum review:

New scheduling of courses is proposed with introduction of new courses and movement of existing courses in the scheduling. Detailed syllabus of first four semesters is set according to the feedback analysis. All the courses are subject to revision and the major changes are listed below:

No.	Stake holder Suggestions	Semester	Major Updates in Curriculum / syllabus
1	Faculty: Applied Physics Part shall be removed and combined with Computer Organization Professional Communication shall be focused on reading , writing and speaking skills with new digital resources	I	23DS120: Foundations of Data Science course is introduced in the place of Applied Physics 23DS130: Digital Electronics And Computer Organization is introduced combining Digital Electronics component of physics and Computer organization course 23DS180: Professional English is introduced in place of Professional Communication
2	Student, Faculty, Alumni: Python programming basic constructs shall be introduced before statistics	II	23DS270 Python Programming and Applied Statistics LAB [Increased Credits from of lab Applied Statistics Lab from 2 to 3 and included Python Programming]
3	Faculty	III	23DS310: Partial Differential Equations And Transform is added
4	Faculty, students, Alumni:	IV	23DS480: Java Programming Lab [Increased Credits from 2 to 3] with additional concept

	Hands on practice in Java shall be strengthened Faculty, Alumni: Necessity of having Software engineering as core Faculty, Student, Alumni: Practice of AI/ML Models should be more inside curriculum		23DS450:Software Engineering moved from Elective to core 23DS470 :Predictive Analytics Lab is introduced
5	Faculty, Alumni: Necessity of miniprojects in building student employability	V	23DS580: MINI PROJECT [3 Credits] [6 hours per week] is introduced
6	Faculty, Alumni: Ethics in the processes of Data Analytics needs to be mandatory	VI	23DS640: Ethics for Data Science moved from Elective to core
7	Faculty, Alumni: Data Visualization to be part of mandatory courses Associated data visualization lab shall be incorporated	VIII	23DS820: Data visualization moved from Elective to core 23DS880 : Business Analytics And Visualization Lab is introduced to incorporate Business analytics dashboard reporting
8	Alumni: New trends in AI/ML shall be recognized	Elective	23DSPK0: Explainable Artificial Intelligence is added to elective list

Semesterwise Changes:

Semester I

23DS110	Calculus	Concepts of Limits & Continuity are modified. Rearranged the topics.
23DS120	Foundations of data science	New syllabus to introduce the applications and algorithms of Data Science
23DS130	Digital electronics and computer organization	Important concepts of Digital and Computer Organization are combined
23DS140	Problem solving using c programming	Hardware Interface removed, Practice problems introduced
23DS150	Discrete structures	Combinatorics added
23DS170	C programming lab	No specific change is required
23DS180	Professional English	More emphasis on listening, reading and speaking skills with new digital resources

Semester II:

23DS210	Theory Of Probability	Bernouli's distribution included under theoretical distributions.
23DS220	Applied Statistics	TOOLS: d3.js, Excel, Tableau are included
23DS230	Graph Theory	Trees, Planar Graphs, and Vector Spaces of Graphs are added. Random Graphs are removed.
23DS240	Object Oriented Programming	STL components (vectors, lists, stacks, queues) added
23DS250	Organizational Theory And Behaviour	Case studies are included

23DS270	Python Programming And Applied Statistics Lab	Python programming exercises are introduced Statistics - correlation coefficient, hypothesis testing, ANOVA
23DS280	Object Oriented Programming Lab	All Experiments are streamlined with theory syllabus

Semester III:

23DS310	Transforms And Their Applications	Partial Differential Equations is added.
23DS320	Abstract Algebra	Retained the same syllabus
23DS330	Data Structures	BST and AVL tree are added Hashing moved to ADS Basics of Graphs added
23DS340	Database Management	No specific change is required
23DS350	Operating Systems	No specific change is required
23DS370	Data Structures Lab	Binary Tree, AVL Tree and Graph traversal included. Hashing techniques are removed
23DS380	Relational Database Lab	No specific change is required

Semester IV:

23DS410	Linear Algebra	Topics in vector spaces and Linear transformations have been ordered
23DS420	Predictive Analytics	Decision trees added
23DS430	Design And Analysis Of Algorithms	No specific change is required
23DS440	Advanced Data Structures	Red Black tree added, Hashing techniques are added
23DS450	Software Engineering	DevOps included
23DS470	Predictive Analytics Lab	New laboratory course; Exercises reflect the theory
23DS480	Java Programming Lab	2 credits to 3 credits. Java Script, Java Servlets added to assist Web technology

Other activities for Curriculum Enrichment:

- MoUs are to be signed with Start up organizations
- Encouraging student to take online courses from TCE Online courses, NPTEL, Coursera, Edx.
- Introduction and conduct of industry supported courses in addition to the existing two courses.

Anilk 20/11/23
BoS Coordinator

Parasuram
HoD /AMCS

To be circulated among Faculty members