2018.4.13 **शैक्षिक सत्र 2018-19 के आड सेमेस्टर के समस्त बी0टेक0 पाठ्यक्रमों हेतु बोर्ड आफ स्टडीज द्वारा संस्तुत परीक्षकों की सूची का अवलोकन एवं विभिन्न विभागो द्वारा स्नातक पाठ्यक्रमों के सैलेबस में किये गये संशोधनो का अनुमोदन।**

शैक्षिक सत्र 2018-19 के आड सेमेस्टर के समस्त बी0टेक0 पाठ्यक्रमों हेतु बोर्ड आफ स्टडीज द्वारा संस्तुत लिखित एवं प्रायोगिक परीक्षा का पैनल प्राप्त किया गया, जिसे माननीय कुलपति महोदय के अनुमोदनोपरान्त परीक्षा नियंत्रक को अग्रिम कार्यवाही हेतु प्रेषित किया गया।

निम्न विभागो से प्राप्त प्रस्ताव विद्या परिषद के अनुमोदनार्थ निम्न प्रस्ताव प्रस्तुत हैः-

रसायन अभि0 विभाग

1. बी0टेक0 (रसायन अभि0) के द्वितीय एवं तृतीय वर्ष के सम सेमेस्टर का पाठ्यक्रम
2. बी0टेक0 तृतीय वर्ष के सम सेमेस्टर के विभागीय इलेक्टिव कोर्स का पाठ्यक्रम
3. बी0टेक0 तृतीय वर्ष (रसायन अभि0) सम सेमेस्टर के विभागीय इलेक्टिव कोर्स का निर्धारण
4. बी0टेक0 चतुर्थ वर्ष के विषम तथा सम सेमेस्टर के कोर्स स्ट्क्चर तथा NPTEL कोर्स को बी0टेक0 तृतीय वर्ष (रसायन अभि0) विषम सेमेस्टर हेतु विभागीय इलेक्टिव कोर्स के रूप में निर्धारण।

विभागाध्यक्ष, रसायन अभि0 विभाग द्वारा अग्रसारित बोर्ड आफ स्टडीज से संस्तुत उपरोक्त प्रस्ताव विद्या परिषद के माननीय सदस्यों के अवलोकनार्थ पृष्ठ संख्या 171 से पृष्ठ संख्या 216 पर प्रस्तुत है।

विद्या परिषद के माननीय सदस्यों से अनुरोध है कि कृपया उक्त का अनुमोदन प्रदान करने की कृपा करें।

विद्युतकण एवं संचार अभि0 विभाग

निम्न विषयों के पाठ्यक्रम में संशोधन तथा सत्र 2019-20 से एक नये इलेक्टिव कोर्स के अध्यापन का प्रस्तावः-

विषय कोड	विषय का नाम	प्रभावी होने का सत्र
Course Syllabus Revised		
BEC – 11A	Network Analysis and Synthesis	2019-20
BEC – 15A	Solid State Devices and Circuits	
BEC – 27A	Analog Integrated Circuit	
BEC – 41A	VLSI Design	
BEC – 43A	Wireless Communication	
BEC – 54A	Advanced Semiconductor	
BEC – 58A	Fundamental of Satellite	
BEC – 68A	Neural Network	
BEC – 29A	Electonics Measurement and Instrumentation	
BEC – 42A	Digital Signal Processing	
New Course Proposed		
BOE – 25	Industrial Instrumentation	2019-20

विद्या परिषद के माननीय सदस्यों के अवलोकनार्थ पृष्ठ संख्या 217 से पृष्ठ संख्या 235 पर प्रस्तुत है।

विद्या परिषद के माननीय सदस्यों से अनुरोध है कि कृपया उक्त का अनुमोदन प्रदान करने की कृपा करें।

Minutes of the meeting of Board of Studies (BOS) held in the cabin of Head, ITCA on 29/09/2018 at 12.30 PM.

Followings were present in the meeting:

1.	Dr. S.P Singh,	Professor & Head, ITCA	Chairman
2.	Dr. Shiva Prakash	Professor, ITCA	Internal Member
3.	Sri D.S Singh	Associate Professor, ITCA	Internal Member
4.	Dr. Jay Prakash	Assistant Professor, ITCA	Internal Member
5.	Sri R.K Dwivedi	Assistant Professor, ITCA	Internal Member
6.	Dr. Sanjay Kumar Singh	Professor, IIT (BHU)	External Member
7.	Dr. Satish Kumar Singh	Associate Professor, IIIT Allahabad	External Member
8.	Smt. Rekha Gadia	Technical Director, NIC Gorakhpur	External Member
9.	Sri Vivek Singh Kushwaha	Director, Oneshield Software Gurgaon	External Member

The following decisions were taken unanimously:

1. The BoS has approved the panel of examiners for theory and practical examinations of MCA for odd semester (Session 2018-19). (Annexure-1)
2. The BoS has recommended the modification in the credit structure of the MCA-Sem-II subject **Data Structure & Applications (MCA-102).** After modification, subject MCA-102 will be of **5 credits** instead of **4 credits**. The details pertaining to current and modified syllabus with credit structure for this subject are available in Annexure-2 A and Annexure-2 B respectively.
3. The course structure and syllabi (to be effective from session 2019-20) of MTech(IT), MCA and the proposed BTech(IT) programs are thoroughly discussed. The suggestions submitted during meeting are noted down and it is decided to incorporate them in the course structure and syllabi of these courses before start of session 2019-20.

(Vivek Singh Kushwaha)
External Member

29/9/2018
(Rekha Gadia)
External Member

(Satish Kumar Singh)
External Member

(Sanjay Kumar Singh)
External Member

(R.K Dwivedi)
Internal Member

(Jay Prakash)
Internal Member

(D.S. Singh)
Internal Member

29/09/2018
(Shiv Prakash)
Internal Member

29.9.18
(S. P Singh)
Chairman

2018.4.14 शैक्षिक सत्र 2018-19 के आड सेमेस्टर के समस्त एम0टेक0/एम0बी0ए0/एम0सी0ए0/एम0एस0सी0 पाठ्यक्रमों हेतु बोर्ड आफ स्टडीज द्वारा संस्तुत परीक्षकों की सूची का अवलोकन एवं विभिन्न विभागो द्वारा परास्नातक पाठ्यक्रमों के सैलेबस में किये गये संशोधनो एवं सत्र 2019-20 से प्रारम्भ हो रहे **M.Sc. Mathematics (Specialization in Computing)** के क्रेडिट स्ट्क्चर तथा प्रथम वर्ष के पाठ्यक्रम का अनुमोदन।

शैक्षिक सत्र 2018-19 के आड सेमेस्टर के समस्त एम0टेक0/एम0बी0ए0/एम0सी0ए0/एम0एस0सी0 पाठ्यक्रमों हेतु बोर्ड आफ स्टडीज द्वारा संस्तुत लिखित एवं प्रायोगिक परीक्षा का पैनल प्राप्त किया गया, जिसे माननीय कुलपति महोदय के अनुमोदनोपरान्त परीक्षा नियंत्रक को अग्रिम कार्यवाही हेतु प्रेषित किया गया।

निम्न विभागो से प्राप्त प्रस्ताव विद्या परिषद के अनुमोदनार्थ निम्न प्रस्ताव प्रस्तुत है:-

विद्युतकण एवं संचार अभि0 विभाग

New Course Proposed

विषय कोड	विषय का नाम	प्रभावी होने का सत्र
MEC-160	Fundamental of Nanoscale Transistor	2019-20
MEC-169	Introduction & Design of Photovoltaic Systems	2019-20

आई0टी0 एण्ड सी0ए0 विभाग

Modification in Credit Structure

विषय कोड	विषय का नाम	पूर्व क्रेडिट	नया क्रेडिट
MCA-102	Data Structure & Application	4 Credit (3-1-0)	5 Credit (3-1-2)

प्रयुक्त विज्ञान विभाग

Approval of Syllabus and Credit Structure

कोर्स	पाठ्यक्रम/क्रेडिट स्ट्क्चर/वर्ष	प्रभावी होने का सत्र
M.Sc. Physics	Syllabus of Second Year (III & IV Semester)	2019-20
M.Sc. Mathematics	Syllabus and Credit Structure of First Year (I & II Semester)	2019-20

विद्या परिषद के माननीय सदस्यों के अवलोकनार्थ पृष्ठ संख्या 237 से पृष्ठ संख्या 287 पर प्रस्तुत है।

विद्या परिषद के माननीय सदस्यों से अनुरोध है कि कृपया उक्त का अनुमोदन प्रदान करने की कृपा करें।

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(S. P Singh)
Chairman

Annexure-2 B

Proposed Syllabus & Credit Structure

MCA-102 DATA STRUCTURE & APPLICATIONS

5 Credits (3-1-2)

Course Objectives:

1. To understand the various techniques of sorting and searching
2. To design and implement arrays, stacks, queues, and linked lists
3. To understand the complex data structures such as trees and graphs

Learning Outcomes: On completion of this course, students are expected to be capable of understanding the data structures, their advantages and drawbacks, how to implement them in C, how their drawbacks can be overcome and what the applications are and where they can be used. Students should be able to learn about the data structures/ methods/algorithms mentioned in the course with a comparative perspective so as to make use of the most appropriate data structure/ method/algorithm in a program to enhance the efficiency (i.e. reduce the run-time) or for better memory utilization, based on the priority of the implementation.

UNIT- I: **9**

Linear Data Structure: Introduction, Concepts of Data and data structures, ADT, basic idea of pseudo-code, Algorithm efficiency and analysis, Array: Different representations – row major, column major. Sparse matrix - its implementation and usage, Linked List: Singly linked list, circular linked list, doubly linked list, linked list representation of polynomial and applications.

UNIT- II **9**

Stack and Queue: Stack and its implementations (using array, using linked list), applications, Queue, circular queue, dequeues. Implementation of queue- both linear and circular (using array, using linked list), applications, Recursion: Principles of recursion – use of stack, differences between recursion and iteration, tail recursion, recursion removal, Applications

UNIT- III **9**

Nonlinear Data Structures: Trees: Basic terminologies, forest, tree representation (using array, using linked list). Binary trees - binary tree traversal, threaded binary tree & its applications, expression tree. Binary Search Tree- operations & applications, Height balanced binary tree – AVL tree (insertion, deletion with examples only). B-Trees – operations (insertion, deletion with examples only), Graph definitions and concepts: Graph representations – adjacency matrix, adjacency list, and adjacency multi-list. Graph traversal and connectivity – Depth first search (DFS), Breadth-first search (BFS) – concepts of edges used in DFS and BFS, applications. Minimal spanning trees, Shortest Path Algorithm

UNIT IV **9**

Searching, Sorting: Sorting Algorithms: Bubble sort and its optimizations, insertion sort, shell sort, selection sort, merge sort, quick sort, heap sort (concept of max heap, application – priority queue), radix sort. Searching: Sequential search, binary search, interpolation search Hashing: Hashing functions, collision resolution techniques.

EXPERIMENTS Write C/C++ Programs to illustrate the concept of the following:

1. Arrays
2. Linked List
3. Stack
4. Queue
5. Graph
6. Tree
7. Searching & Sorting Algorithms

Books & References:

1. Data Structures and Program Design In C, 2/E by Robert L. Kruse, Bruce P. Leung.
2. Data Structures in C by Aaron M. Tenenbaum.
3. Fundamentals of Data Structures of C by Ellis Horowitz, Sartaj Sahni, Susan Anderson-freed.
4. Data Structures by S. Lipschutz.
5. Data Structures Using C by Reema Thareja.
6. Data Structure Using C, 2/e by A.K. Rath, A. K. Jagadev.
7. Introduction to Algorithms, by Thomas H. Cormen, Charles E. Leiserson, Ronald L. Rivest, Clifford Stein

29/9/2018 29/9/18