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D No. MADHAV INSTITUTE OF TECHNOLOGY AND SCIENCE, GWALIOR - 474005
(A Govt. Aided UGC Autonomous & NAAC Accredited Institute Affiliated to R.G.P.V. Bhopal, M.P.)

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24.02.2021

**BOARD OF STUDIES (BoS) PROCEEDING
IN
COMPUTER SCIENCE & ENGINEERING
AND
INFORMATION TECHNOLOGY
(Meeting Dated - 28th November, 2020)**

Madhav Institute of Technology & Science, Gwalior-474 005

(A Govt. Aided UGC Autonomous & NAAC Accredited Institute Affiliated to RGPV, Bhopal)

Department of CSE & IT

Minutes of Meeting of Board of Studies (BoS) in Computer Science & Engineering and Information Technology

Date: 28/11/2020

The Meeting of Board of Studies (BoS) in Computer Science & Engineering and Information Technology (CSE & IT) was held on 28th November, 2020 at 11:30 A.M. Onwards through Video Conferencing. During the meeting following were present.

1.	Dr. Akhilesh Tiwari, Professor & Head, Department of CSE & IT, MITS, Gwalior (M.P.)	Chairman
2.	Dr. A. K. Solanki, Professor (Computer Science & Engineering), B.I.E.T. Jhansi (U.P.)	External Member (Academics) [Nominee of Hon'ble Vice Chancellor RGPV Bhopal]
3.	Dr. Nanhay Singh, Professor & Head, Department of Computer Science & Engineering, Netaji Subhas University of Technology (NSUT) (East Campus), Delhi (Formerly Ambedkar Institute of Advanced Communication Technologies and Research, Delhi)	External Member (Academics) [Nominee of Academic Council (AC), MITS Gwalior]
4.	Dr. Virendra Prasad Vishwakarma, Associate Professor, University School of Information and Communication Technology (USICT), Guru Gobind Singh Indraprastha University (GGSIPIU), Delhi	External Member (Academics) [Nominee of Academic Council (AC), MITS Gwalior]
5.	Dr. Dinesh Kumar Vishwakarma, Associate Professor, Department of Information Technology, Delhi Technological University (DTU), Delhi	External Member (Academics) [Nominated by DTU Delhi under twinning arrangement of TEQIP-III]
6.	Dr. Nisha Chaurasia, Assistant Professor, Department of IT, Dr B R Ambedkar National Institute of Technology Jalandhar	External Member (Alumnus)
7.	Dr. R. K. Gupta, Professor	Member
8.	Dr. Manish Dixit, Professor	Member
9.	Ms. Khushboo Agarwal, Assistant Professor	Member
10.	Mr. Punit Kumar Johari, Assistant Professor	Member
11.	Dr. Sanjiv Sharma, Assistant Professor	Member
12.	Mr. Vikas Sejwar, Assistant Professor	Member
13.	Mr. Abhilash Sonker	Member
14.	Ms. Jaimala Jha, Assistant Professor	Member
15.	Mr. Jamvant Singh Kumare, Assistant Professor	Member
16.	Mr. Rajeev Kumar Singh, Assistant Professor	Member
17.	Ms. Neha Bhardwaj, Assistant Professor	Member

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Minutes of Meeting of Board of Studies (BoS) in CSE & IT held on 28th Nov. 2020

18.	Dr. R. R. Singh Makwana, Assistant Professor	Member
19.	Mr. Mahesh Parmar, Assistant Professor	Member
20.	Mr. Amit Kumar Manjhvar, Assistant Professor	Member
21.	Dr. R. S. Jadon, Professor (Computer Application)	Member
22.	Dr. Anshu Chaturvedi, Professor (Computer Application)	Member
23.	Mrs. Parul Saxena, Assistant Professor (Computer Application)	Member

In addition to above, faculty members engaged under TEQIP-III Project were also present.

The following members could not attend the meeting

1.	Dr. Kapil Sharma, Professor & Head, Department of Information Technology, Delhi Technological University (DTU), Delhi	External Member (Academics) / Nominated by DTU Delhi under twinning arrangement of TEQIP-III /
2.	Mr. Amitabh Shrivastava, Senior Consultant, TCS Noida	External Member (Industry)

The following deliberation took place in the meeting:

The minutes of previous meeting of Board of Studies (BoS) held on 30th May, 2020 (through video conferencing) were confirmed, followed by the item-wise discussion (as per the agenda of present BoS meeting), as follows

ITEM CSEIT-1:	<p>To propose the list of courses which the students can opt from SWAYAM/NPTEL/MOOC based learning platform, to be offered in online mode under Departmental Elective (DE) category (with credit transfer), in the B.Tech VIII Semester (batch admitted in 2017-18): applicable during January-June 2021 academic session</p> <p>The list of Departmental Elective (DE-5) courses to be offered from SWAYAM/NPTEL/MOOC based learning platform (in online mode) for B.Tech VIII Semester CSE & IT discipline (under flexible curriculum) were discussed and finalized, as per the following detail</p> <div style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <p style="text-align: center;">DE-5 (B.Tech CSE/IT):</p> <ul style="list-style-type: none"> • Social Networks • Real Time Operating System • Reinforcement Learning </div> <p><i>In continuation, it is also discussed and recommended that the above mentioned list of Departmental Elective (DE) course may be kept dynamic and newly emerging courses may be inducted (as and when desired) in line with the industrial need and emerging developments.</i></p>
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ITEM CSEIT-2:

To propose the list of courses which the students can opt from SWAYAM/NPTEL/MOOC platform to be offered (for students of other departments) in online mode under Open Category (OC) courses (with credit transfer) in the VIII Semester (batch admitted in 2017-18) applicable during January-June 2021 academic session

The courses to be offered under Open Category (OC) Courses for B.Tech VIII Semester (for the students of other departments) to be offered from SWAYAM/NPTEL/MOOC based learning platforms (in online & offline mode) were discussed and recommended, as per the following detail

<u>OC-4:</u>	<u>OC-5:</u>
<ul style="list-style-type: none">• Introduction to Machine Learning• Introduction to Internet of Things• Software Testing	<ul style="list-style-type: none">• Deep Learning• Social Networks• Real Time Operating System

It is further discussed that the Open Category (OC) courses are meant only for the students of other departments; therefore the above list of courses may be kept dynamic (as per the need and demand from other departments and availability of the courses on the SWAYAM/NPTEL/MOOC based learning platforms). Moreover, it is also discussed and proposed that the courses under Open Category (OC) may also be considered other than those available on SWAYAM/NPTEL/MOOC based learning platforms and the same can be offered in traditional teaching learning mode (if required). This will be determined by the department on the basis of emergent situation to cater the need of students.

ITEM CSEIT-3:

To propose the list of "Additional Courses" which can be opted for getting an
(i) Honours (for students of the host department)
(ii) Minor Specialization (for students of other departments)

[These will be offered through SWAYAM/NPTEL/MOOC based Platforms for the VI semester students (batch admitted in 2018-19) and for the VIII semester students (batch admitted in 2017-18)], applicable during January-June 2021 academic session

The courses available on SWAYAM/NPTEL/MOOC based learning platforms (to be offered under the provision for Honours and Minor Specialization) were discussed and recommended, as mentioned below

B.Tech VIII Semester (2017-18 admitted batch)
Additional Courses for "Honours" (Parent Department)
<ul style="list-style-type: none">• User-centric Computing for Human-Computer Interaction• Introduction to Parallel Programming in OpenMP• Privacy and Security in Online Social Media

	<table border="1"> <tr> <td colspan="2" style="text-align: center;">Additional Courses for "Minor Specialization" (Other Departments)</td> </tr> <tr> <td colspan="2"> <ul style="list-style-type: none"> • Computer Organization and Architecture: A Pedagogical Aspect • Foundations of Cryptography • Privacy and Security in Online Social Media </td> </tr> <tr> <td colspan="2" style="text-align: center;">B.Tech VI Semester (2018-19 admitted batch)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Additional Courses for "Honours" (Parent Department)</td> </tr> <tr> <td colspan="2"> <ul style="list-style-type: none"> • GPU Architectures and Programming • Privacy and Security in Online Social Media • Artificial Intelligence: Knowledge Representation and Reasoning 7 </td> </tr> <tr> <td colspan="2" style="text-align: center;">Additional Courses for "Minor Specialization" (Other Departments)</td> </tr> <tr> <td colspan="2"> <ul style="list-style-type: none"> • Design and Analysis of Algorithms • Programming, Data Structures and Algorithms using Python • Programming in Java </td> </tr> </table> <p>In continuation, it is discussed that the above list must be kept dynamic and additional courses may be inducted (as per the requirement).</p>	Additional Courses for "Minor Specialization" (Other Departments)		<ul style="list-style-type: none"> • Computer Organization and Architecture: A Pedagogical Aspect • Foundations of Cryptography • Privacy and Security in Online Social Media 		B.Tech VI Semester (2018-19 admitted batch)		Additional Courses for "Honours" (Parent Department)		<ul style="list-style-type: none"> • GPU Architectures and Programming • Privacy and Security in Online Social Media • Artificial Intelligence: Knowledge Representation and Reasoning 7 		Additional Courses for "Minor Specialization" (Other Departments)		<ul style="list-style-type: none"> • Design and Analysis of Algorithms • Programming, Data Structures and Algorithms using Python • Programming in Java 	
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<p>ITEM CSEIT-4:</p>	<p>To review and finalize the list and syllabi for all Departmental Elective (DE) Courses of VI Semester (to be offered to the batch admitted in 2018-19) under the flexible curriculum along with their COs : {applicable during January-June 2021 academic session}</p> <p>The courses to be offered under Departmental Elective (DE) category (in offline mode) for B.Tech. VI Semester CSE / IT discipline (under flexible curriculum) were discussed and recommended, as per the following detail</p> <table border="1"> <tr> <td data-bbox="491 1294 991 1503"> <p style="text-align: center;"><u>DE-1 (B.Tech CSE):</u></p> <ul style="list-style-type: none"> • Network & Web Security • Cloud Computing • Mobile Computing </td> <td data-bbox="991 1294 1497 1503"> <p style="text-align: center;"><u>DE-1 (B.Tech IT):</u></p> <ul style="list-style-type: none"> • Network & Web Security • Cloud Computing • Agile Methodology </td> </tr> </table> <p><i>It is further discussed that the above mentioned list of courses may be expanded (if required) to accommodate the industrial demand and emerging technological advancements in the field.</i></p> <p>The syllabi of Courses along with their Course Outcomes (COs) is Annexed as Annexure-I</p>	<p style="text-align: center;"><u>DE-1 (B.Tech CSE):</u></p> <ul style="list-style-type: none"> • Network & Web Security • Cloud Computing • Mobile Computing 	<p style="text-align: center;"><u>DE-1 (B.Tech IT):</u></p> <ul style="list-style-type: none"> • Network & Web Security • Cloud Computing • Agile Methodology 												
<p style="text-align: center;"><u>DE-1 (B.Tech CSE):</u></p> <ul style="list-style-type: none"> • Network & Web Security • Cloud Computing • Mobile Computing 	<p style="text-align: center;"><u>DE-1 (B.Tech IT):</u></p> <ul style="list-style-type: none"> • Network & Web Security • Cloud Computing • Agile Methodology 														

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<p>ITEM CSEIT-5:</p>	<p>To review and finalize the list of Courses from SWAYAM/NPTEL/MOOC based learning platforms (to be offered to batch admitted in 2018-19) in online mode under Departmental Elective (DE) Courses (with credit transfer) in the VI Semester {applicable during Jan -June 2021 academic session}</p> <p>The list of Departmental Elective (DE-2) courses to be offered from SWAYAM/NPTEL/MOOC based learning platforms with credit transfer (in online mode) for B.Tech. VI Semester CSE & IT discipline (under flexible curriculum) were discussed and recommended, as per the following detail</p> <div style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <p style="text-align: center;">DE-2 (B.Tech CSE / IT):</p> <ul style="list-style-type: none"> • Data Analytics with Python • Introduction to Machine Learning • Deep Learning </div> <p>In continuation, it is also discussed and recommended that the above mentioned list of Departmental Elective (DE) course may be kept dynamic and newly emerging courses must be included (as per the need and recent developments).</p>				
<p>ITEM CSEIT-6:</p>	<p>To review and finalize the Courses & Syllabi to be offered (for the batch admitted in 2018-19) under the Open Category (OC) Courses for VI semester students of other departments along with their COs</p> <p>The courses to be offered under Open Category (OC) Courses for B.Tech. VI Semester (for the students of other departments) were discussed and recommended as per the following detail</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Offered by CSE Department</th> <th style="text-align: center;">Offered by IT Department</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;"> <p>OC-1:</p> <ul style="list-style-type: none"> • Python Programming • Data Structures </td> <td style="text-align: center;"> <p>OC-1:</p> <ul style="list-style-type: none"> • Software Engineering • Data Mining & Warehousing </td> </tr> </tbody> </table> <p>Further, considering the fact that the Open Category (OC) courses are meant only for the students of other departments, it is discussed and recommended that the above list of courses may be changed / expanded (as per the need and demand from other departments). Moreover, the department may offer any of the courses from the mentioned list.</p> <p>The detailed syllabi (along with their COs) is Annexed as Annexure-II</p>	Offered by CSE Department	Offered by IT Department	<p>OC-1:</p> <ul style="list-style-type: none"> • Python Programming • Data Structures 	<p>OC-1:</p> <ul style="list-style-type: none"> • Software Engineering • Data Mining & Warehousing
Offered by CSE Department	Offered by IT Department				
<p>OC-1:</p> <ul style="list-style-type: none"> • Python Programming • Data Structures 	<p>OC-1:</p> <ul style="list-style-type: none"> • Software Engineering • Data Mining & Warehousing 				
<p>ITEM CSEIT-7:</p>	<p>To review and finalize the Courses & Syllabi to be offered (to the batch admitted in 2018-19) under Departmental Core (DC) Courses for the VI semester students along with their Cos</p> <p>The Syllabi of all the Departmental Core (DC) Courses, to be offered during VI Semester (B.Tech. CSE / IT Programme) along with their COs under flexible curriculum were discussed and recommended. The same is enclosed as Annexure-III.</p>				

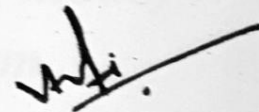
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ITEM CSEIT-8:	<p>To review and finalize the Courses & Syllabi to be offered (to the batch admitted in 2019-20) under Departmental Core (DC) Courses for the IV semester students along with their COs</p> <p>The Syllabi of all the Departmental Core (DC) Courses, to be offered during IV Semester (B.Tech. CSE / IT Programme) along with their COs under flexible curriculum were discussed and recommended. The same is enclosed as Annexure-IV.</p>
ITEM CSEIT-9:	<p>To review and finalize the Scheme Structure & Syllabi (of I & II semester) of the existing B.Tech programmes in CSE /IT discipline and newly introduced B.Tech. programmes in emerging areas [effective from the batch admitted in 2020-21 academic session]</p> <p>The Scheme Structure & Syllabi (of I & II Semester) of following B.Tech programmes were discussed, finalized and recommended</p> <ul style="list-style-type: none"> • B.Tech (Computer Science & Engineering) • B.Tech (Information Technology) <p><u>Newly introduced programmes</u></p> <ul style="list-style-type: none"> • B.Tech Internet of Things (IoT) • B.Tech. Information Technology (Artificial Intelligence and Robotics) <p>The Scheme Structure & syllabi (along with their COs) is Annexed as Annexure-V, VI, VII and VIII.</p>
ITEM CSEIT-10:	<p>To identify gaps in CO attainment levels for Jan. - June 2020 semester and propose corrective measures for improvement</p> <p>The attainment level of Course Outcomes (COs) for all the courses pertaining to Jan. -June 2020 semester was presented. In continuation, it is discussed that the courses (if any) where the set target value has not been attained, should be critically analyzed to identify the difficulty level and other causes. The analysis must be followed by corrective measures, such as arrangement of extra / remedial classes, proper coverage of COs in Question Paper and interaction with the students for possible improvement.</p> <p>The same is Annexed as Annexure-IX</p>
ITEM CSEIT-11:	<p>To prepare and propose the equivalence list of courses for B. Tech programmes (for 2017-18, 2018-2019, 2019-2020 & the 2020 admitted batch)</p> <p>The equivalence list of courses for B. Tech programmes (for 2017-18, 2018-2019, 2019-2020 & the 2020-21 admitted batch) were presented before the house. The same is enclosed as Annexure-X.</p>

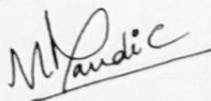
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<p>ITEM CSEIT-12:</p>	<p>(a) To propose and recommend the panel of examiners for PG dissertation viva voce examination</p> <p>The panel of examiner(s) for PG dissertation viva voce examination was discussed and recommended. The same is enclosed as Annexure-XI.</p> <p>(b) To review the syllabi of Data Structures and Algorithms (to be offered during the First Semester of Master in Computer Application (MCA) programme w.e.f. 2020-21 Academic Session (applicable during Jan.-June 2020 semester).</p> <p>The syllabus of Data Structures and Algorithms (Departmental Core Course of MCA First Semester) was reviewed. The same is finalized and recommended with slight changes and content reorientation. The recommended syllabus is Annexed as Annexure-XII.</p> <p>(c) To finalize the course/subject codes pertaining to the schemes of various programmes.</p> <p>It is decided that the course / subject codes must be followed as per the prevailing mechanism of the institute.</p>
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The meeting ended with the vote of thanks to all the members.



(Dr. Akhilesh Tiwari)
 Professor & Head,
 Department of CSE & IT,
 MITS Gwalior
 [Chairman, BoS in CSE & IT]



DEAN (ACADEMICS)
 M.I.T.S
 GWALIOR

***List of Courses Finalized after Review
and Post BoS Meeting Discussion
for Jan.-June 2021 semester
(effective for B.Tech VIII and VI semester to
be offered in offline and online mode)
Under Flexible Curriculum***

For batch admitted in Academic Session 2017-18

LIST OF COURSES (Through SWAYAM/NPTEL)(VIII SEMESTER)

8 SEM (Jan- June 2021)	OC-4 (2 credit)	<i>Privacy and Security in Online Social Media (8 Weeks(in 12 weeks Duration))</i> <i>Introduction to internet of things (12 Weeks)</i>
	OC-5 (2 credit)	<i>Data Science for Engineers(8 Weeks)</i> <i>Social Networks (12 Weeks)</i>

8 SEM (Jan- June 2021)	DE-5 (2 credit)	Social Networks (12 Weeks) Privacy and Security in Online Social Media (8 Weeks(in 12 weeks Duration))
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Honors (VIII) (Jan-June 2021)	User-centric Computing for Human-Computer Interaction (8 Weeks)
	Reinforcement Learning (12 Weeks)
	Information Security - 5 - Secure Systems Engineering (8 Weeks)

Minor (VIII) (Jan-June 2021)	Foundations of Cryptography (12 Weeks)
	Introduction to Machine Learning (12 Weeks)

For batch admitted in Academic Session 2018-19

LIST OF COURSES (VI SEMESTER)

6 SEM (Jan- June 2021)	OC-1 (offline Mode)	Software Engineering (offered by IT)
		Data Mining & Warehousing (offered by IT)
		Data Structures (offered by CSE)
		Python Programming (offered by CSE)
6 SEM (Jan- June 2021)	DE-1 (offline Mode)	Network & Web Security
		Cloud Computing
	DE-2 (online Mode) (4 credits)	Agile Methodology (for IT) / Mobile Computing (for CSE)
		Data Analytics with Python (12 Weeks)
		Introduction to Machine Learning (12 Weeks)
		Artificial Intelligence: Knowledge Representation And Reasoning (12 Weeks)
Honors (VI) (Jan- June 2021)	GPU Architectures and Programming (12 Weeks)	
	Privacy and Security in Online Social Media (8 Weeks(in 12 weeks Duration))	
	Introduction to Industry 4.0 and Industrial Internet of Things (12 Weeks)	
Minor (VI) (Jan-June 2021)	Design and analysis of algorithms	
	Programming, Data Structures And Algorithms Using Python	
	Programming in Java	