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**BOARD OF STUDIES (BoS) PROCEEDING
IN
COMPUTER SCIENCE & ENGINEERING
AND
INFORMATION TECHNOLOGY**
(Meeting Dated – 30th May, 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: 30/05/2020

The Meeting of Board of Studies (BoS) in Computer Science & Engineering and Information Technology was held on 30th May, 2020 (12:15 P.M. onwards) **through video conferencing**. During the meeting following were present.

1.	Dr. Akhilesh Tiwari, Professor & Head	Chairman
2.	Dr. A. K. Solanki, Professor (Computer Science & Engineering), B.I.E.T. Jhansi (U.P.)	External Member (Academics) <i>(Nominee of Hon'ble Vice Chancellor RGPV Bhopal)</i>
3.	Dr. Nanhay Singh, Professor & Head, Department of Computer Science & Engineering, Ambedkar Institute of Advanced Communication Technologies & Research (AIACR), Delhi	External Member (Academics) <i>(Nominee of Academic Council (AC), MITS Gwalior)</i>
4.	Dr. Virendra Prasad Vishwakarma, Professor, University School of Information and Communication Technology (USICT), Guru Gobind Singh Indraprastha University (GGSIPU), Delhi	External Member (Academics) <i>(Nominee of Academic Council (AC), MITS Gwalior)</i>
5.	Dr. Nisha Chaurasia, Assistant Professor, Department of IT, Dr. B. R. Ambedkar National Institute of Technology (NIT) Jalandhar	External Member (Alumnus)
6.	Dr. R. K. Gupta, Professor	Member
7.	Dr. Manish Dixit, Professor	Member
8.	Ms. Khushboo Agarwal, Assistant Professor	Member
9.	Mr. Punit Kumar Johari, Assistant Professor	Member
10.	Dr. Sanjiv Sharma, Assistant Professor	Member
11.	Mr. Vikas Sejwar, Assistant Professor	Member
12.	Mr. Abhilash Sonkar, Assistant Professor	Member
13.	Ms. Jaimala Jha, Assistant Professor	Member
14.	Mr. Jamvant Singh Kumare, Assistant Professor	Member
15.	Ms. Neha Bhardwaj, Assistant Professor	Member
16.	Mr. Rajeev Kumar Singh, Assistant Professor	Member
17.	Mr. Mahesh Parmar, Assistant Professor	Member
18.	Mr. R. R. Singh Makwana, Assistant Professor	Member
19.	Mr. Amit Kumar Manjhar, Assistant Professor	Member
20.	Dr. R. S. Jadon, Professor (Computer Application)	Special Invitee member
21.	Dr. Anshu Chaturvedi, Professor (Computer Application)	Member

22.	Mrs. Parul Saxena, Assistant Professor (Computer Application)	Member
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In addition to above, faculty members engaged under TEQIP-III Project were also present.

The following external members could not attend the meeting

1.	Mr. Amitabh Shrivastava, Senior Consultant, TCS Noida	External Member (Industry)
2.	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)
3.	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)

The following deliberations took place in the meeting:

The minutes of previous BoS meeting held on 23rd November, 2019 were confirmed, followed by item-wise discussion (as per the agenda of the present BoS meeting), as follows

<p>ITEM CSEIT-1:</p>	<p>To propose the list of courses, which the students can opt from SWAYAM / NPTEL platform for <i>Seminar/Self Study in III & V Semester (during July-December 2020 Semester)</i></p> <p>The courses to be offered under Seminar/Self Study through SWAYAM / NPTEL based learning platform for B.Tech III semester (2019 admitted batch) & B.Tech V Semester (2018 admitted batch) (CSE & IT), under flexible curriculum were discussed and finalized as per the following</p> <table border="1" data-bbox="491 1108 1337 1413"> <thead> <tr> <th colspan="2">B.Tech III Sem</th> <th colspan="2">B.Tech V Sem</th> </tr> </thead> <tbody> <tr> <td>Course ID: noc20-cs70</td> <td>Programming, Data Structures and Algorithms using Python</td> <td>Course ID: noc20-cs86</td> <td>Demystifying Networking</td> </tr> <tr> <td>Course ID: noc20-cs79</td> <td>Introduction to Haskell Programming</td> <td>Course ID: noc20-cs74</td> <td>Reinforcement Learning</td> </tr> </tbody> </table> <p>In continuation, it is discussed that above listed courses are to be made open, so that most preferred course from the majority of students, can be run under the course category Seminar/Self Study. Moreover, this will be compulsory to register for one online course using SWAYAM/NPTEL. Further, the evaluation will be based on attendance, assignments and presentations.</p>	B.Tech III Sem		B.Tech V Sem		Course ID: noc20-cs70	Programming, Data Structures and Algorithms using Python	Course ID: noc20-cs86	Demystifying Networking	Course ID: noc20-cs79	Introduction to Haskell Programming	Course ID: noc20-cs74	Reinforcement Learning
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<p>ITEM CSEIT-2:</p>	<p>To propose the list and syllabi for all <i>Departmental Elective (DE) Courses of B.Tech VII Semester (under the flexible curriculum) along with their COs</i></p> <p>The courses to be offered under Departmental Elective (DE-3) category (in</p>												

offline mode) for B.Tech VII Semester, CSE & IT discipline (under flexible curriculum) were discussed and finalized, as per the following detail:

DE-3 (B.Tech CSE):

- Networking with TCP/IP
- Data Mining & Warehousing
- Distributed Systems

DE-3 (B.Tech IT):

- Networking with TCP/IP
- Data Mining & Warehousing
- Software Testing

The syllabi of Courses along with their Course Outcomes (COs) is Annexed as Annexure-I

It is further discussed that the above mentioned list of courses may be expanded (if required) to accommodate the industrial demand and latest technological advancements.

ITEM CSEIT-3:

To propose the list of Courses from SWAYAM/NPTEL/MOOC Platform to be offered in *online mode under DE category* for credit transfer in the VII Semester

The list of Departmental Elective (DE-4) courses to be offered from SWAYAM/NPTEL/MOOC based learning platform (in online mode) for B.Tech VII Semester, CSE & IT discipline (under flexible curriculum) were discussed and finalized, as per the following detail

DE-4 (B.Tech CSE / IT):

- Practical Machine Learning with Tensorflow
- Scalable Data Science
- Introduction to Internet of Things

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 in line with the industrial need and emerging developments (as and when desired).

ITEM CSEIT-4:

To propose the Courses & Syllabi to be offered under *Open Category (OC) Courses* for VII semester students of other departments along with their COs

The courses to be offered under **Open Category (OC) Courses** for B.Tech VII Semester (for the students of other departments) under flexible curriculum, were discussed and finalized, as per the following detail

OC-2:

- Soft Computing
- Network Security
- Data Mining & Warehousing

OC-3:

- R Programming
- Artificial Intelligence
- Computer Networks

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).

	The detailed syllabi (along with their COs) is Annexed as Annexure-II										
ITEM CSEIT-5:	<p>To propose the list of “Additional Courses” which can be opted for getting (i) Honours (ii) Minor Specialization <i>[These will be completed through SWAYAM/NPTEL/MOOC based Platforms during V and VII semester]</i></p> <p>The courses available on SWAYAM/NPTEL/MOOC based learning platforms for Honours and Minor Specialization were discussed and identified. The same is listed, as mentioned below</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">B.Tech VII Semester (2017-18 admitted batch)</td> </tr> <tr> <td style="text-align: center;">Additional Courses for “Honours” (Parent Department)</td> </tr> <tr> <td> <ul style="list-style-type: none"> • Introduction to Industry 4.0 and Industrial Internet of Things • Deep Learning • Big Data Computing </td> </tr> <tr> <td style="text-align: center;">Additional Courses for “Minor Specialization” (Other Departments)</td> </tr> <tr> <td> <ul style="list-style-type: none"> • Object Oriented System Development using UML, Java and Patterns • Cloud computing • Computer Graphics </td> </tr> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">B.Tech V Semester (2018-19 admitted batch)</td> </tr> <tr> <td style="text-align: center;">Additional Courses for “Honours” (Parent Department)</td> </tr> <tr> <td> <ul style="list-style-type: none"> • Introduction to Internet of Things • Data Science for Engineers • The Joy of Computing using Python </td> </tr> <tr> <td style="text-align: center;">Additional Courses for “Minor Specialization” (Other Departments)</td> </tr> <tr> <td> <ul style="list-style-type: none"> • Introduction to Operating Systems • Database Management System • Object Oriented Analysis and Design </td> </tr> </table> <p>It is further discussed that the above list of courses for B.Tech VII & B.Tech V Semester respectively for “Honours” and “Minor Specialization” (finalized from the pool of courses available on SWAYAM/NPTEL platform) are to be made open to all the students. Moreover, in the emergent situation, the above list may be expanded.</p>	B.Tech VII Semester (2017-18 admitted batch)	Additional Courses for “Honours” (Parent Department)	<ul style="list-style-type: none"> • Introduction to Industry 4.0 and Industrial Internet of Things • Deep Learning • Big Data Computing 	Additional Courses for “Minor Specialization” (Other Departments)	<ul style="list-style-type: none"> • Object Oriented System Development using UML, Java and Patterns • Cloud computing • Computer Graphics 	B.Tech V Semester (2018-19 admitted batch)	Additional Courses for “Honours” (Parent Department)	<ul style="list-style-type: none"> • Introduction to Internet of Things • Data Science for Engineers • The Joy of Computing using Python 	Additional Courses for “Minor Specialization” (Other Departments)	<ul style="list-style-type: none"> • Introduction to Operating Systems • Database Management System • Object Oriented Analysis and Design
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<ul style="list-style-type: none"> • Introduction to Operating Systems • Database Management System • Object Oriented Analysis and Design 											
ITEM CSEIT-6:	<p>To propose the syllabi of <i>Mandatory Course (MC)</i> titled “Intellectual Property Rights” (IPR) of <i>VII semester</i> under the flexible curriculum along with their COs</p> <p>The course syllabi for <i>Mandatory Course (MC)</i> titled “Intellectual Property Rights” (IPR) of VII semester (under the flexible curriculum) has already been prepared at institution level. The same will be adopted by the department. Though this course will be taught by the coordinating department, the department of CSE & IT will arrange the departmental</p>										

	level activities, such as workshops on IPR and Patents, seminars and talks on the significance and role of patents to create awareness among the students and faculty members.						
ITEM CSEIT-7:	<p>To propose the Experiment list/ Lab manual for <i>Laboratory Courses</i> to be offered in <i>VII semester</i></p> <p>The experiment list and lab manual for the Laboratory Course (DLC-6) (Internet of Things) has already been finalized during the previous BoS meeting, dated 23rd November 2019 (under the ITEM CSEIT-7). Subsequently, the same was also approved by the Academic Council in its meeting held on 7th December 2020.</p>						
ITEM CSEIT-8:	<p>To explore and prepare the tentative list of Departmental Elective (DE) Courses (along with COs) for VIII semester (to be run through SWAYAM/NPTEL/MOOC based platform)</p> <p>The tentative list of Departmental Elective (DE) Courses for B.Tech VIII semester (CSE/IT) (under flexible curriculum) (to be run through SWAYAM/NPTEL/MOOC based platform), were discussed and same is detailed below</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td colspan="2" style="text-align: center;">Tentative list of Departmental Elective (DE) Courses for B.Tech VIII semester</td> </tr> <tr> <td colspan="2" style="text-align: center;"><u>DE-5 (B.Tech CSE / IT):</u></td> </tr> <tr> <td colspan="2" style="text-align: center;"> <ul style="list-style-type: none"> • Social Networks • Applied Natural Language Processing • Deep Learning for Computer Vision </td> </tr> </table>	Tentative list of Departmental Elective (DE) Courses for B.Tech VIII semester		<u>DE-5 (B.Tech CSE / IT):</u>		<ul style="list-style-type: none"> • Social Networks • Applied Natural Language Processing • Deep Learning for Computer Vision 	
Tentative list of Departmental Elective (DE) Courses for B.Tech VIII semester							
<u>DE-5 (B.Tech CSE / IT):</u>							
<ul style="list-style-type: none"> • Social Networks • Applied Natural Language Processing • Deep Learning for Computer Vision 							
ITEM CSEIT-9:	<p>To explore and prepare the tentative list of courses to be offered under <i>Open Category (OC) Courses</i> for <i>VIII semester</i> students of other departments (<i>run through SWAYAM/NPTEL MOOC based platform</i>)</p> <p>The courses were explored tentatively and listed, as follows</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: center;">OC-4 (To be opted by other department students)</th> <th style="text-align: center;">OC-5 (To be opted by other department students)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;"> <ul style="list-style-type: none"> • Introduction to Machine Learning • Introduction to internet of things • Scalable Data Science </td> <td style="text-align: center;"> <ul style="list-style-type: none"> • Deep Learning • Big Data Computing • Human Computer Interactions </td> </tr> </tbody> </table>	OC-4 (To be opted by other department students)	OC-5 (To be opted by other department students)	<ul style="list-style-type: none"> • Introduction to Machine Learning • Introduction to internet of things • Scalable Data Science 	<ul style="list-style-type: none"> • Deep Learning • Big Data Computing • Human Computer Interactions 		
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ITEM CSEIT-10:	<p>To discuss the analysis report of curriculum feedback from various stakeholders</p> <p>The detailed analysis report of feedback on curriculum and Course</p>						

	<p>Outcomes (COs) from various stakeholders (students, alumni, faculty members, etc.) was presented and discussed. The house noticed and appreciated that most of the suggested courses (on emerging areas) / activities (from alumni) are in practice (at present) in the department. Moreover, it is discussed that the department will take necessary initiatives, wherever required.</p>
ITEM CSEIT-11:	<p>Any other matters:</p> <p>(a) To discuss and propose new Scheme/Curriculum for M.Tech (CSE/IT/Cyber Security) Programmes</p> <p>The newly proposed scheme and curriculum for M.Tech (CSE/IT/Cyber Security) programmes were presented before the house. The provisions made therein related to SWAYAM/NPTEL/MOOC based courses, Electives (in offline mode and through SWAYAM/NPTEL) and Open Category courses (in offline mode and through SWAYAM/NPTEL) were discussed. The scheme / curriculum are Annexed as Annexure-III.</p> <p>(b) To discuss and propose new Scheme / curriculum for Two Years MCA Programme</p> <p>The newly proposed scheme and curriculum for two years MCA programme was presented before the house. The provisions made therein related to SWAYAM/NPTEL/MOOC based courses, Electives (offline mode / through SWAYAM/NPTEL/MOOC), Open Category (OC) course (offline mode / through SWAYAM/NPTEL/MOOC) were discussed and finalized with minor adjustments (as per the suggestions). The scheme / curriculum is Annexed as Annexure-IV.</p> <p>(c) To induct a new course in the Third Semester of current scheme of MCA programme</p> <p>Considering the recent development and industrial requirements (pertaining to programming practices), it was proposed to induct a new course “Programming in Python” in the existing scheme of Third Semester MCA (3 Years) programme (for 2018-19 & 2019-20 admitted batch). This course will be offered in place of the course “Computer Oriented Optimization”. The proposal (along with the syllabi) was discussed and recommended by the house. The Syllabi of newly proposed course “Programming in Python”, is Annexed as Annexure-V.</p> <p>(d) To discuss about the induction of InfyTQ certification courses (under the Infosys Campus Connect MoU) as Industry Elective courses / otherwise, as per the requirement raised by Infosys Ltd. (for B.Tech III Year Students)</p> <p>To induct the InfyTQ certification courses based on emerging areas (as offered by Infosys) under InfyTQ certification initiatives (as part of Infosys Campus Connect program), it is desired to include / offer these courses, as listed below, as part of Electives / or the department may offer the same by creating Batches (separately) (by following all the requirements for the same). This is in the benefit of students, as these are based on emerging areas / current industrial practices. Therefore, the</p>

current list of Electives may be expanded to accommodate such courses.

List of Courses:

- Internet of Things
- Cloud Computing
- Python Programming
- Software Testing
- Machine Learning Using R
- Big Data
- Business Intelligence
- Agile Software Development
- Enterprise Application
- User Interface Technologies

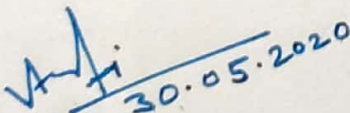
Above listed courses are representative courses. Further the department has to identify the suitable courses to be offered under InfyTQ certification. Moreover, the curriculum for these courses will be followed as suggested by Infosys.

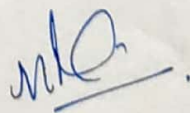
Suggestions by Members:

- It was suggested that the tentatively decided course "Deep Learning for Computer Vision" for B.Tech VIII Semester under DE-5 (to be run through SWAYAM/NPTEL) may be replaced with other suitable course, as the prerequisite of this course may not be satisfied by all the students.
- It was suggested to re-examine the contents of course "Programming, Data Structures and Algorithms using Python" (to be run through SWAYAM/NPTEL) under Seminar/Self Study for B.Tech III Semester (CSE & IT). This is to ensure that the course has no prerequisite, which is not being satisfied by the concerning students.
- It was suggested to place the course "Operating Systems" as compulsory in the newly proposed scheme of two years MCA programme. Further, it is also discussed to slightly reduce the courses pertaining to business management and introduce IT specific courses (as per the need). Moreover, the house was in opinion that there should be the inculcation of one introductory course (if possible) regarding IT/Computer Science in the MCA I Semester.
- It was suggested that there should be the provision of Literature Study/Presentation in the newly proposed Scheme of M.Tech programmes (in lieu of self learning / presentation), in the I & II semester.

Note: The minutes of Board of Studies (BoS) meeting were electronically circulated to all the internal and external members of BoS and they have consented (electronically) on the deliberation / resolution, recorded (as per above) against various agenda items.

The meeting ended with vote of thanks to all the members


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


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