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Adoption of Massive Open Online Courses (MOOCs) in the 8th Semester of the B.Tech. in Electronics & Communication Engineering of all the affiliated colleges and in-house courses of the University:

The University has decided to allow the 8th semester students of MAKAUT, WB, family in the of the B.Tech. course in Electronics and Communication Engineering streams to opt for **Massive Open Online Courses (MOOCs)**. This is in accordance with the initiative taken by UGC and AICTE under the overall leadership of MHRD to encourage the adoption of these courses in order to facilitate the teaching-learning process and enhance the employability of the Engineering graduates. This decision of the University will be particularly useful for the students of ECE who have been offered internship in industry during their 8th semester commencing from January 2018, and will therefore be unable to attend the regular classroom courses during the semester. Adoption of MOOCs will enable the students to satisfy their course completion requirements including class attendance criteria without compromising their employment demands.

In the B.Tech (8th semester) ECE stream there is one paper in Humanities and Social Science, one Professional elective and one Free elective along with Project work, Design Laboratory and Grand viva. A student may choose any of the three options:

- a) The student can follow the regular classroom courses for all the papers prescribed in the syllabus.
- b) The student can opt for courses under MOOCs for the three theory papers and the practical paper in lieu of regular classroom courses.
- c) The student can opt for a mixture of courses under MOOCs and regular classroom courses to cover the three theory and practical papers.

Thus there would be three categories of students in the B.Tech. ECE stream of the 8th semester for the January 2018 even semester corresponding to the three options listed above:

- (a) Students opting for regular class room courses as per MAKAUT, WB curriculum
- (b) Students fully opting for courses under MOOCs (those who have received offer for internship in companies during their 8th semester)
- (c) Students opting for a mixture of regular class room and MOOCs courses.

The following points may be carefully noted in connection with adoption of MOOCs –

- (i) Students willing to undertake MOOCs will have to formally apply to the respective College/Institute for necessary approval
- (ii) Subject teacher (Mentor) will facilitate academic interaction with students in the College
- (iii) Lecture sessions and tutorial classes for each online course under MOOCs must be displayed in the class routine
- (iv) The faculty members are encouraged to enroll for MOOCs along with the students for better grasp of the subject and complete understanding of the process from end to end.

The University has drawn up a mapping between the B.Tech 8th semester courses (for ECE stream) of MAKAUT, WB, and those offered under NPTEL (MOOCs), Open Tutorials etc after consultation with academicians from the ECE representatives. This mapping is given in the following table.

Paper with Code		NPTEL Online Course	Duration (Registration ends)	Instructor
Humanities & Social Science	HS801: Organisational Behaviour [HSS] (2,0,0)	Principles of Human Resource Management [Link> http://nptel.ac.in/courses/110105069]	8 weeks (5.2.18)	Pr. Aradhna Malik, IITKGP
		Speaking Effectively [Link> http://nptel.ac.in/courses/109105117]	8 weeks (5.2.18)	Pr. Anjali Gera Roy, IITKGP
Elective 1 (Professional Electives)	EC801A: Smart Antenna (3,0,0)	Antennas [Link> http://nptel.ac.in/courses/108101092]	12 weeks (22.1.18)	Pr. Girish Kumar, IITB
	EC801B: Digital Signal Processing (3,0,0)	Biomedical Signal Processing	12 weeks (22.1.18)	Pr. Sudipta Mukhopadhyay, IITKGP
		Mathematical Methods & Techniques in Signal Processing	12 weeks (22.1.18)	Pr. Sayan Srinivas Garani, IISc
EC801C: Satellite Communication & Remote Sensing (3,0,0)	VLSI Physical Design [Link> http://nptel.ac.in/courses/106105161]	12 weeks (22.1.18)	Pr. Indraneel Sebgupta, IITKGP	
Elective 2 (Open / Free Electives)	EC802A: Neural N/W & Applications [CSE] (3,0,0)	Artificial Intelligence: Knowledge Representation & Reasoning [CSE] [Link> http://nptel.ac.in/courses/106106140]	12 weeks (22.1.18)	Dr. Deepak Khemani, IITB
	EC802B: Material Sc & Engg [Mat. Sc] (3,0,0)	Physics of Materials [Link> http://nptel.ac.in/courses/113106039]	12 weeks (22.1.18)	Pr. Pratap Haridoss, IITM
	EC802C: Renewable Energy [EE] (3,0,0)	Power System Engineering [EE]	12 weeks (22.1.18)	Pr. Debapriya Das, IITKGP
One paper is to be chosen from each category shown in the first column				
Practical paper	Design Lab	Spoken Tutorials: http://spoken-tutorial.org		
Project	Project-2	To be carried out at the place of internship for the internees or in the colleges/institutes for those who are not going for internship.		
Grand Viva	To be carried out at respective Institute.			

Exam date for all courses under NPTEL: April 28/29, 2018

The following observations are made in respect of the Practical Paper.

The students pursuing their curriculum through MOOCs may complete the course requirements for the **Design Lab** of the 8th semester by choosing any three topics from among the following and obtaining the necessary certification from <http://spoken-tutorial.org/>

1. C and C++ ; Basic and Intermediate Levels
2. Advanced C++
3. OSCAD (Now eSim)
4. Java Business Application
5. PHP & MySQL
6. Python
7. Scilab
8. Linux and Ubuntu

In connection with the completion of the course requirements of the Project - 2, the following points are to be noted –

- (a) MOOCs students undergoing internship in companies during 8th semester will carry out projects under the supervision of their respective companies.
- (b) The final evaluation of student's performance will be done by the company's supervisors and will be intimated to respective internal guides of the College.
- (c) Students would be required to attend the final project presentation before external examiners at the end of the semester in their respective Colleges.

All students including those undergoing internship will have to appear and qualify in the Grand Viva conducted by their respective departments of the college at the end of the 8th semester.

The following points are to be noted regarding Class Attendance of the students in the B.Tech 8th semester (ECE streams):

- (i) Students opting for Regular Classroom based courses are to gain attendance by regularly attending classroom sessions in their colleges.
- (i) Students opting for mixture of Regular Classroom based courses and MOOCs Online courses are to be present in college and attend all the assigned periods in the time table for courses in both classroom and MOOCs.
- (ii) Students undergoing Internship thereby fully opting for MOOCs are to bring their attendance records from their respective companies.
- (iii) Projects completed by the student interns in their respective companies will be considered for submission to the respective Colleges as their B.Tech projects.

Credit Transfer

- B. Tech 8th semester students opting fully for MOOCs courses will not have to appear for any internal examination of the 8th semester theory papers but have to submit the MOOCs assignment completion documents.
- They will also not have to appear for the end semester examinations of the B. Tech 8th Semester Theory papers but have to submit the final result obtained from MOOCs.*
- Students will have to submit to their respective colleges the certificates obtained from NPTEL after completion of continuous assessments and end course evaluation
- For practical papers the students have to submit the certification obtained from <http://spoken-tutorial.org>

**For this semester commencing from January, 2018 the students who have opted for MOOCs courses may also appear for end semester examination from MAKAUT,WB in the papers they are studying under MOOCs. So for them the internal marks will be from the MOOCs. The external marks will be from the MOOCs or from the MAKAUT,WB examination.*

For other streams the university may issue similar notices in subsequent semesters