

## Minutes of the CSS-MOOCs PIC Meeting

Date: 7 October 2017

Venue: Hotel Lemon Tree, Chennai

Time: 9.30am – 1 pm

### Members present:

Prof. Bhaskar Ramamurthi – Chairman, NPTEL PIC and Director, IIT Madras

Prof. Anupam Basu – Coordinator, NPTEL, IIT Kharagpur

Prof. Kushal Sen – Coordinator, NPTEL, IIT Delhi

Prof. L. Umanand – Coordinator, NPTEL, IISc Bangalore

Prof. B.K.Gandhi – Coordinator, IIT Roorkee

Prof. Andrew Thangaraj – Coordinator, NPTEL, IIT Madras

Prof. Prathap Haridoss – Coordinator, NPTEL, IIT Madras

Prof. Sridhar Iyer – Head, CDEEP, IIT Bombay

Prof. Deepu Philip – IIT Kanpur

Prof. K.Mangala Sunder – Special Invitee

Staff from the different NPTEL offices.

### Members not present:

Prof. Sunil Khijwania – Coordinator, NPTEL, IIT Guwahati



Prof. Bhaskar Ramamurthi, Chairman, CSS-MOOCs PIC, welcomed the gathering and thanked the members for attending the meeting.

An update was given by Prof. Andrew Thangaraj on the events in the last 10 months.

Exam	Number of courses	Enrollment	Registration	Certified
March 2017	64	219899	22101	19064
April 2017	66	314042	21998	19341
September 2017	65	581064	43702	-
October 2017	94	459274	26725	-

Faculty from IIIT Delhi, IIIT Hyderabad, IIIT Bangalore, IIT Patna, IIT Ropar, IIT Bhubaneswar, University of Delhi, IISER Pune have offered courses in 2017 under NPTEL.

### Course run related:

#### Content creation

It was decided to

- Focus more on making the content videos more engaging
- Incorporate more animations and lab experiment demos
- Avoid the use of black board and encourage use of WACOM tablets

#### Assignment errors:

The number of errors in assignments and the number of times that re-evaluation had to be done was a small but significant fraction in the last 2 semester runs. These need to be reduced with better training imparted to the faculty-TA teams and with more checks in place by local NPTEL offices. Common errors found were:

- Configuring the answer incorrectly - option can be changed and assignment re-evaluated
- All options given are incorrect and none match the actual answer – question has to be canceled
- Incorrect weightage for questions – scores more than 100

- Deleting a question/assignment midway or including something midway when an assignment is live

### Discussion Forum:

It was decided that importance of the forum needs to be highlighted to the faculty-TA team and it should be ensured that all questions need to be replied to with as little response time as possible, maximum being 24 hrs.

### Question paper creation

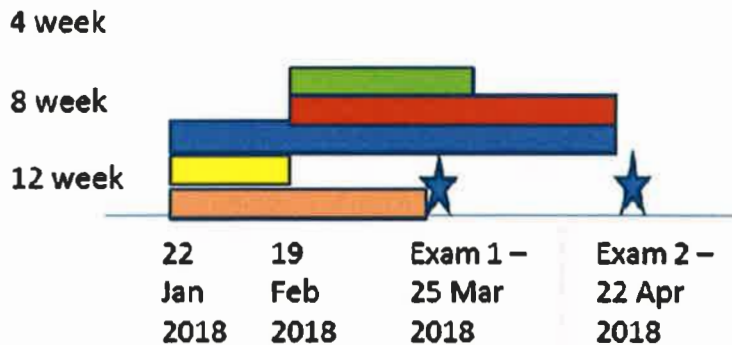
It was also decided that only the faculty member will work on the question paper and maintain the confidentiality of the same without the involvement of the Teaching Assistants.

### Honorarium for running of the course

The honorarium for offering the MOOCs will be split in the following manner:

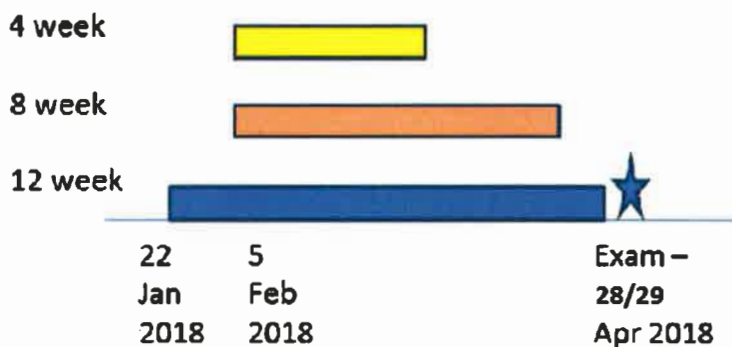
Duration of course	For assignments and forum (INR) 5k per assignment + 10k for forum/ 4 weeks	For 2 question papers (INR)	Total (INR)
4 weeks	30000	20000	50000/-
8 weeks	60000	40000	100000/-
12 weeks	90000	60000	150000/-

## Change of course schedule for next semester – Jan to Apr 2018



### CURRENT TIMELINE

- 2 exam dates in 2 different months
- Exam related activities happen twice within a semester
- Bulk of the courses start in the first part



### PROPOSED TIMELINE

- 4 exam sessions over a single weekend
- IR, form, logistics for spocs – simplifies
- 4 and 8 week courses accessible to more college schedules
- Allows for 5 week and 9 week courses

The timelines for 2018, both as per existing approach (indicated as current timeline in figure) as well as a new schedule proposed (marked as proposed timeline in figure), are indicated below. The committee approved that we can go with the new schedule proposed to see if it will benefit more colleges and be logistically easier for both the learners and NPTEL office and decide on what changes have to be made for July 2018 based on the feedback.

### **New features to be implemented:**

Inside the [nptel.ac.in/noc](http://nptel.ac.in/noc) website: under each course, the faculty member will have a login to view the following:

- The profile sheet of enrolled candidates
- Weekly feedback – about lessons and assignments – will be circulated and provided to the faculty member as a summary
- Forum tracking – number of questions posted and those unanswered
- Details about exam registered candidates

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- Assignment submission numbers and average assignment score
- Final course feedback - summary provided

The institute NPTEL office will have a login to view the above for all courses.

### **To improve the course delivery, the following are proposed:**

1. Pre course survey of motivation that includes finding out if the candidate is interested in writing the exam – might help plan for number of exam registrations
2. Assignment 0 - to test pre-requisites – this will help the students to assess their own readiness for the course and also help them decide if they need to choose another course
3. To be able to create FAQ from forum questions – if TAs tag a question as Best Answered – these can be filtered out and made into an FAQ for the course
4. Once in every 4 weeks – it is suggested to have a live video session with interested learners

### **Staff requirement in NPTEL offices for MOOCs**

- Timelines and monitoring are important for effective delivery of content and dedicated resources are a must for the MOOCs effort.
- It was decided that any NPTEL office wishing to offer MOOCs should have the following staff members:
  - Staff member 1: Studio in-charge (manages a team, if needed)
  - Staff member 2: Course portal in-charge (manages a team, if needed)
  - Staff member 3: Question paper in-charge (manages a team, if needed)
  - Staff member 4: Overall in-charge (escalation point for issues with Staff members 1-3)
  - NPTEL coordinator will serve as the escalation point over and above staff member 4 as necessary
- The staff must be trained (by visiting and spending time with the IIT Madras teams) to handle and close issues within a 24-hour period. All emails about issues should be responded to and resolved within 24 hours – by midnight each day to prevent spill over to subsequent days.



- This is critical for successful running of online courses coordinated across various institutes. In particular, even if staff are on travel etc, they must have a knowledgeable and clearly identified substitute who will take care of continuity in their absence. Such continuous support is needed during the weekend as well. Due to clearly defined and tight deadlines, the project cannot handle delays of few days for any reason. The identified staff must answer emails and messages and calls over weekend as well.

It was also decided that faculty members of any institute can offer courses through NPTEL office of any other institute – depending on convenience and logistics of the faculty member.

It was also decided that Teaching assistants for the course can be any person as recommended by the faculty member (current/former students, faculty members in other colleges, etc) with the consent of the institute NPTEL coordinator.

### **Way forward for NPTEL**

The committee decided that NPTEL online initiative should map the courses relevant to GATE exam and strive to offer the same in a regular manner and also chart the course by specifying the order in which these can be systematically taken by any student who is preparing for GATE in all possible disciplines. Hence NPTEL online courses can also serve as an affordable preparatory medium for the GATE exam.

Many colleges report a high teaching load due to faculty crunch thus leaving little time for research. It was suggested that if such colleges adopt some courses through NPTEL online mode, the teaching load for faculty can reduce.

### **NPTEL online certification courses for credit within IITs**

IITM has already passed in the Senate that NPTEL online certification courses can be taken for up to 7 credits in the old system by IITM BT/DD students, which will not be counted for CGPA calculation. All the coordinators were urged to see if the respective institutes can also implement credit transfer for the NPTEL online certification courses.



## How can faculty members from other colleges/industry partners, offer courses under NPTEL?

The following norms were laid down as part of faculty members from outside colleges/industry partners wishing to offer courses on NPTEL:

- The faculty member/industry partner from the outside college needs to identify and partner with a faculty member from one of the IITs/IISc - to co-offer a course under NPTEL
- The content created must have at least 50% or more contribution from the IIT faculty member, unless otherwise approved by the NPTEL coordinator of the institute.
- The ultimate responsibility of the course will rest with the IIT faculty member.
- The certificate will have the logo of the IIT offering the course.

## Finances

Funds of Rs 31 crores were received for the courses offered between Jan-May 2017 and July-Nov 2017 as 2 installments - in the months of August 2017 and September 2017. As per the minutes of the PIC meeting of April 23 2016, funds were distributed to the 8 institutes according to the courses offered by each.

Of the amount remaining, it was decided to keep Rs 3.8 crores at IIT Madras for common activities such as workshops, common infrastructure such as servers, publicity, SMS and email services, translation efforts and to support staff who are involved in common activities such as coding and website maintenance, text transcription/translation activities, portal and question paper coordination, exam partner coordination activities, etc.

Text transcription and verification amounts are also currently paid by IITM for all courses by retaining the component towards this in MOOCs course budget at IITM.

A sum of Rs 1 crore was decided to be set aside to assist institutes that require financial assistance in the short term to help them start off with offering courses and the advance extended would be adjusted against the funds to be transferred for the courses offered from these institutes.



The remaining amount was decided to be disbursed among the 8 institutes in proportion of the number courses offered in 2017. The institutes are to maintain this fund to tide over any delays in future funding etc.

## Miscellaneous

### Corpus funds collection - Donate to NPTEL exam fee waiver

Since many users are interested to contribute to NPTEL as acknowledgement of the resources made available, it was decided that a "Donate to NPTEL Exam fee waiver" fund collection can be set up. Collection gateway and management will be through IITM alumni site – users can avail tax exemption for the same too.

### Industry local chapter

Many industries are interested in getting their employees into NPTEL programme and hence the concept of Industry Local Chapter is to be introduced to facilitate the same. There will be no cost involved in making any company a Local Chapter and services offered would be to view enrollments, and assign mentors, view exam registrations and results of their employees, similar to a College Local Chapter.

If any company wishes to get candidate information for the purpose of offering them job opportunities, a suitable financial model will be evolved for the same.

### Partnering with CII

CII has been entrusted with the task of creating an education portal and is looking to include similar components such as colleges and industries. NPTEL is partnering with CII on this.

### Update on SWAYAM

- All courses being offered every semester are being created on SWAYAM and opened for enrollment.
- Agreement currently is that for certification, candidates need to enroll on the online courses portal.





- IITM office is populating videos alone every Monday in each course. Assignments and forum are not being put on this

### **Issues**

- Enrollment is open through the course but we close enrollments on start date of course.
- Errors are encountered while creating some courses and SWAYAM team needs to resolve those errors.

### **Analytics and NPTEL online courses user related data**

All course content and aggregate statistics is public on the portal. Individual candidate data is not public and it was decided that this data will be made available to any of the coordinators for research purposes in an anonymized fashion and not to anyone outside the NPTEL system. The terms of service will be modified to include consent from portal users for use of anonymized data for NPTEL's own research purposes.

### **VideoKen**

Videoken is a company that has its own platform and also implements Machine Learning widely to analyse videos, identify the keywords in any video and use those as tags to index the video. They had approached NPTEL to offer this service free of cost.

It was decided that a separate tab would be created to provide links to such companies highlighting their services that NPTEL users can avail.

### **NPAT (National Programming Aptitude test)**

NPAT – joint effort of NPTEL, ACM and Google - was announced on 11 July 2017 and enrollments opened on the portal [npat.nptel.ac.in](http://npat.nptel.ac.in), with a few practice problems given in C, C++.

Exam was conducted on 13 August, Sunday in which more than 21000 candidates participated. 8 problems were given and e-transcript has been made available. Basic problems of finding errors, designing test cases and fill in the blanks were given. This is meant as a self-assessment programming test for students across the country.



## **Courses in clinical and paraclinical areas**

Prof. Mangal updated that Dr. Manoj Singh and Prof. Valiathan of Manipal University had finalized the list of courses and the SMEs for the same. The committee decided that infrastructure and finance support would be extended to them for creation of the same as required.

## **Other items:**

Prof. Bhaskar requested for a study to be done on the statistics of other MOOCs portals such as Coursera and edX in terms of number of courses, enrollment, completion rates and payment for the access/certification.

It was also decided that coordinators can meet more regularly through VC to smooth out any operational and finance issues while in person PIC meeting can be conducted twice a year.

SPOC workshops in various regions would be a good way to interact with coordinators and get feedback and inputs. Every institute is to build a local chapter team that will maintain relationship with SPOCs of colleges and conduct workshops within their region.

IIT Bombay suggested that faculty members can undergo the course "MOOC on MOOCs" developed by them to give them an orientation of the online method of offering courses. Prof. Sridhar Iyer volunteered to conduct in-person workshops for faculty offering MOOCs. Respective institutes are requested to contact him for fixing suitable times for these workshops.

It was decided to pursue trademarking the name NPTEL and the logo.



## Coordinator honorarium for the year 2017

The committee approved the honorarium to be paid to the coordinators of the CSS-MOOCs committee for the year Jan-Dec 2017 @ Rs 2 lakhs/coordinator subject to a maximum of Rs 4 lakhs/institute.



Prof. Andrew Thangaraj

Coordinator, NPTEL, IIT Madras



Prof. Bhaskar Ramamurthi

Chairman, CSS-MOOCs PIC & Director, IIT Madras

