

CONSORTIUM FOR EDUCATIONAL COMMUNICATION JAC CAMPUS, ARUNA ASAF ALI MARG, NEW DELHI – 110067

Phone: 011-26897418/19 Fax:01126897416 Website: www.cec.nic.in



CORRIGENDUM / EXTENSION OF DATE FOR THE INVITATION FOR EXPRESSION OF INTEREST and PROPOSALS FOR DEVELOPING MOOCS

In reference to the Advertisement published in Times of India and Dainik Jagran dated 18th August, 2017, Please Note that submission of Expression of Interest along with MOOC Proposal shall remain open throughout the year. Any Academic/Industry Expert can submit his/her proposal for consideration. All the received proposals will be evaluated in every three months. Other terms and conditions will remain same of subject advertisement.

National Coordinator Undergraduate MOOCs

Asmit now 2017



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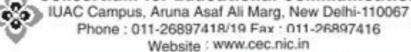
In reference to the Advertisement published in Times of India and Dainik Jagran dated 18th August, 2017, Please Note that closing date of submission of expression of Interest along with MOOC Proposal is extended till 15th November 2017. Other terms and conditions will remain same of subject advertisement.

National Coordinator Undergraduate MOOCs

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Consortium for Educational Communication





Invitation for Expression of Interest and Proposals for Developing MOOCs

Government of India (GOI) in its pursuit of National Digital Initiatives launched indigenous technology enabled learning platform-SWAYAM for hosting Massive open online courses (MOOCs).

Consortium for Educational Communication (CEC), an Inter University Centre of UGC on Electronic media which has been designated as National Coordinator (NC) for developing Non Technological UG courses. CEC invites Expressions of Interest for development of MOOCs at undergraduate level from academic(s)/Professionals, associated with universities/educational institutions.

Priority would be given to MOOCs under the UGC approved CBCS curricula in fundamentals/threshold/emerging areas of knowledge in any subject taught at UG level including elective and optional papers/courses in the subject for undergraduate studies. MOOCs can also be proposed in Fundamentals/ skill development / value education that are in demand for lifelong learning.

For further Details kindly refer to details, guidelines and Instructional Manual available on the CEC website:www.cec.nic.in

Proformas for Expression of Interest and Detailed Proposal can be downloaded from CEC Website:- www.cec.nic.in and the same may be submitted via e-mail at cec.moocproposal@gmail.com in the prescribed formats.

The last date for proposal submission is 15th September 2017.

National Coordinator Undergraduate MOOCs

Proforma for Inviting Expression of Interest for Developing MOOCs

(Please read the instructional manual before filling the form and submit at cec.moocproposal@gmail.com)

1.	Title of the MOOC		:		
_	Knov	wledge Stream	:		Refer Annexure-I
2.	Subj	oct			Refer Annexure-II
	Jubj	ect	•		Neter Affilexure-II
	Degr	ree programme	:		Refer Annexure-III
	Cred	lit/Non Credit Course	:	Yes / No	
3.	Details of the Course Coordinator		:		
	3.1	Name	:		
	3.2	Designation	:		
	3.3	Contact Detail	:	Mobile No	(10 digits)
				Alternative mobile number if any	
				Landline No (STD) Email ID:-	
	2.4	.			
	3.4	Experience in years	:		/
	3.5	Nature of Employment		Permanent / Temporary / R Professional / Any other	etired /
	2.6	A SSILICATION OF THE PARTY OF T	_		
	3.6	Affiliating Institution	:	Name of Institution:	
				Address-1 :Address-2 :	
				City: State:	
				PIN:	
				Phone:	
				Email ID:	
		NAAC Rating of institute		(Numeric only)	
4.	Host	Institute offering the course		Name of Institution:	
				Address-1 :	
				City: State:	
				PIN:	
				Phone:	
				Email ID:	
5.		cility for MOOC production/editing	:	Yes No	
		available NO' Which of the Educational	_		Dofor Appoints 11/
		timedia Research center you	:		Refer Annexure-IV
	wou	•			
		luction			
6.	•	ree to provide the Host Institute's	:	Yes / No	Refer Annexure-V
		ent letter before the release of			
	-	s (will be released as per MHRD			
	_	elines and terms & conditions			
	issued by CEC)				
7.		proposal attached	:	Yes / No	

The Course Coordinator may kindly ascertain before uploading the form that they have a Host University/ institute as per the MOOC guidelines from MHRD.

The acceptance of the course shall be in accordance to the MHRD/ UGC /CEC guidelines in force

MOOC Development Plan

(Kindly fill the form as per the instruction given in respected columns and submit at **cec.moocproposal@gmail.com**)

S. NO.	DELIVERABLE	DESCRIPTION	REMARKS
1.0	Course Title	The course title- to give clear indication of content	As per the paper in the CBCS syllabus
2.0	Subject	Discipline	(e.g. Physics, Geology, etc.)
3.0	Course category	UG /PG degree, Certificate / Diploma	
4.0	Course description	Give brief about course content / curriculum	Description should contain 150 to 250 words. The course should conform to CBCS syllabus by UGC, year 2015. See UGC website link: http://www.ugc.ac.in/ugc.notices.aspy?id=107
		diverse disciplines such as arts, science, commerce, performing arts, social sciences and humanities, engineering, technology, law, medicine, agriculture etc. in higher education domain (all courses to be certification-ready). b) School education (9-12 levels) modules; for teacher training as well as teaching and learning aids to learners to help them understand the subjects better and also to help them in better preparedness for competitive examinations for admissions to professional degree programmes. c) Skill based courses, which cover both posthigher secondary school skills that are presently the domain of polytechnics as well as industrial skills certified by the sector skill councils of various Ministries. d) Advanced curriculum and professional certification under a unified scheme in higher education domain that can be tailored to meet the	c_notices.aspx?id=107
		demands of Choice Based Credit System (CBCS) currently being implemented in India at under graduate level. e) Curricula and courses that can meet the needs of life-long learners. f) Independent courses which may not be part of any set curriculum and may be taught as awareness courses, continuing education programme and for training of specific skill sets.	

4.4	specify the universities/institute name, where this course is being taught	A 1 to	A are dit CIMA	VAM source is		d to bo	
4.1	Course Duration (in Weeks)	A 1 to 4 credit SWAYAM course is expected to be covered in 4-12 weeks' duration including the assessment component in which (it should be 40 hours (for 3 credit course) to 90 hours (for a 6 credit course) for the full course) of learning from e-Content, reading reference material, discussion forum posting and assignment.					
4.2	Start Date	Start D	Date	End date	•		
4.3	Course Credits	the conforums	1 credit will be equivalent to 13-15 hours learning the course content, participating in discussion forums and other interactions, working on assignments and activities designated for the course etc. As per UGC guidelines: Instructional Template for Facilitating Implementation of Choice Based Credit System (CBCS)				
4.4	Weekly Study Plan	modul	Lesson plan- the time line of sequential release of module, assignments and deadlines and interactions schedule				
	Rationale for developing this Course						
5.0	Course Objectives	includi	Define the overall objectives of the complete course including the expected learning outcome of the course. Preferably give point wise the learning outcomes				
5.1	Course introductory video	Introductory video- 3-5 minute duration, to be created for the course highlighting its objectives, learning outcomes, brief structure, engagement time etc. the video/ slide show should be appealing and informative for students					
5.2	Pre -requisites	Stude	nt eligibility and	d basic education			
6.0	Host Institution	•					
7.0	Faculty profile	1 O N-		T =			To demonstrate credibility and assert
7.1	Brief about the Course developer (PI/SME) and	(designatio n)			expertise. A brief		
7.2	Team: Brief about Course Instructor and Team:	S. No.	Name & (designatio n)	Department , Institute	e-mail and Phone	Years of experi ence	words

	Total Number of Modules	Total number of modules in the MOOC	
	I- Quadrant Engagement time (Video)	Total video hours of the MOOCs	Video of 25~30 minutes per module
	II- Quadrant Engagement time (Text material, e-book, objectives, summary, glossary, case studies, FAQs, Other Learning material)	Total engagement time for 2 nd quadrant elements for all the modules of the MOOC	Total text material to be 15- 20 pages long per module— 12 font Arial, single space. Counting 3 minutes/page the learning engagement time to be in the range of 45- 60 minutes per module.
	III- Quadrant (References, Web links)	Please provide the reference list as a word document	Give specific links that are viable and direct to appropriate pages. Links to other learning sites. Do not give www.wikipedia.org or www.google.com
	IV – Quadrant Engagement Time Assessment	Total engagement time for in-course assessment. Assessment to include: 1.Quizzes- self graded 2.Assignments- 3 short (up to 200 words) and 2 long answer (up to 500 words) depending on the course requirements	10-15 MCQ per module comprise of Quiz. Engagement time is 1 minute per MCQ for Quiz Engagement time for Assignment questions should be 5 minutes per short question and 10 minutes per long question. Total engagement time should be in range 45-50 minutes per module
8.0	Term End assessment	Proctored exam, with question paper sets to be provided by course faculty.	
9.0	Total Engagement time for Discussion and interaction	The interaction can be through video tutorial or forum moderations and participation. Faculty to encourage discussion. May assign marks for participation and forum interaction. Discussion related to subject matter	Engagement in interaction and discussion is to be factored with grades. Suggested: a) After every 2-3 module give 1 hours of interaction. b) List some topics and questions for discussion in the forum.

9.2	Total Engagement time(hours)	7.1+7.2+7.4+8+9.0	Total engagement time to amount to 2-3 hours per module
10.0	Assessment Plan	Specify requirements for successful course completion Assessment plan – the weight age assigned for different elements of the MOOCs	To be provided by the offering faculty/instructor. refer UGC guidelines: Instructional Template for Facilitating Implementation of Choice Based Credit System (CBCS)
11.0	Grading scheme		For conversion into CGPA and credit scheme for each program refer to UGC guidelines: Instructional Template for Facilitating Implementation of Choice Based Credit System (CBCS)

Four-quadrant for MOOCS course

Name of Quadrant	Contents	File formats /Descriptions
1 st Quadrant e-Tutorial:	Video and Audio Content in an organized form, including Animation, Simulations, Virtual Labs.	Video programme files 1. (Video lectures not exceeding 25-30 minute including the elements of graphics and animation.) please specify Video lecture durations in modules
		 The video shall be –HD (aspect ratio 16:9) resolution 1920 x 1080 video,
		 Compression @500 kbps - 1 mbps with pixel resolution of 480x360 or better files on MPEG4 format. The font size for the PPT accompanying the lectures: Heading: 24-30; Sub-heading: 22-26; Body: 20-24;
2 nd Quadrant	PDF/e-Books/ illustration,	E-Book, Objectives, summery, Glossary, Case
Text Content:	video demonstrations, documents and Interactive simulations wherever	Study, tutorial, FAQ's, transcription of video lectures. Any Other Study Material- Etc.
	required. Related Links, Open Content	WORD FILE / PDF
	on Internet, Case Studies, Anecdotal information,	All text in 15- 20 pages
	Historical development of the subject, Articles.	12 font Arial, single space Text files including all the 2 nd quadrant elements shall be around 2000 - 3000 words for 45-60 minutes of learning engagement time per module
3rd Quadrant	MCQ, Problems, Quizzes,	WORD FILE /PDF
Assessment:	Assignments and solutions, and setting up the FAQ, Clarifications on general misconceptions. Interaction and discussion forum topics	Assessment to include: 1.Quizzes- self graded 10 questions per module 2.Assignments- 3 short (up to 200 words) and 2 long answer (up to 500 words) depending on the course requirements
4 th Quadrant	Final Assessment Paper –	Live interaction and moderation of forum questions
Disscusion Forum and Live	Question Bank (Subjective Or Objective)	and topics WORD FILE /PDF
Interaction:		Two sets of Question Paper to be provided by the Course Faculty PI/SME

Detailed Course Structure Course Title:

(Level & Subject) Syllabus (based on Choice Based Credit System)

Week	Day	Items	Title of Video and Reading text/Lecture/ppt	Remark
	Day 1			
F: (Day 2			MS
First	Day 3			word /
Week	Day 4			PDF.
	Day 5	<u>.</u>		
	Day 1			
Second	Day 2			
Week	Day 3			
VVCCK	Day 4			
	Day 5			
	Day 1			
Third	Day 2			
Week	Day 3			
VVCCK	Day 4			
	Day 5	<u>.</u>		
	Day 1			
Fourth	Day 2			
Week	Day 3			
, , , ook	Day 4			
	Day 5			
	Day 1			
_	Day 2			
Fifth	Day 3			
Week	Day 4			
	Day 5			

Weekly Study Plan Contains Videos in a 5 day in a week format

Instruction Manual for Submitting Expression of Interest (EoI) and Proposal for MOOCs Development

SWAYAM

"Study Webs of Active-Learning for Young Aspiring Minds" (SWAYAM) is the indigenous ICT based platform for hosting Massive Open Online Courses (MOOCS) developed under the aegis of NME-ICT. An initiative of Ministry of Human Resource Development (MHRD), Government of India, MOOCs supplement the formal education system in the country from high school to higher education offering courses based on curriculum, continuing education and skill.

National Coordinator (NC)

Consortium Educational Communication, New Delhi is the National Coordinator for the purpose of development and delivery of MOOCs and overseeing the assessment procedures of such courses offered on SWAYAM at undergraduate level. There are other seven National Coordinators (NC) each for different sectors of education.

Massive Open Online Courses

MOOCs are online courses offered through an ICT platform that enables students to access high quality video lectures, reading resources; allows them to participate in discussion forums; take tests and also earn academic grades. MOOCs may either be Credit or Non-Credit bearing under semester system.

MOOC Structure

The MOOCs being offered on SWAYAM follow the four-quadrant instructional design, as per the MHRD Revised Guidelines. The structure of each MOOC will have following components:

Quadrants	Description
Quadrant-I	Shall contain Video and Audio Content in an organized form,
(e-Tutorial)	Animation, Simulations, video demonstrations, Virtual Labs,
	etc, along with the transcription of the video.
Quadrant-II	Shall contain self instructional material, e-Books, illustrations,
(e-Content) case studies, presentations, Web Resources such	
	references, Related Links, Open source Content on Internet,
	Video, Case Studies, books including e-books, research papers
	& journals, Anecdotal information, Historical development of
	the subject, Articles, etc.
Quadrant-III	Discussion forum for raising of doubts and clarifying them on

(Discussion	a near real time basis by the Course Coordinator or his team.		
Forum)			
Quadrant-IV Shall contain problems and solutions, which could be			
(Assessment)	form of Multiple Choice Questions, Fill in the blanks, Matching		
	Questions, Short Answer Questions, Long Answer Questions,		
	Quizzes, Assignments and solutions, Discussion forum topics		
	and setting up the FAQs, Clarifications on general		
	misconceptions.		

Host Institute:

An educational institution which offers MOOCs on SWAYAM is called Host Institute. The host institute facilitates and conducts the examination, evaluation and award and transfer of credits. On successful completion of each course, the Host Institute offering the MOOCs course would issue the certificate, along with the number of credits and grades, which would be transferred into mark-sheet/certificate issued by his/her parent institute.

Parent Institute:

A parent institute is where a prospective learner is enrolled in a particular program and may further opt for a particular MOOCs hosted on SWAYAM.

On successful completion of the course, the host institute offering it would issue the certificate, along with the number of credits and grades, through which the student can get credits transferred into his/her marks certificate issued by his/her parent institute.

INSTRUCTIONS FOR MOOC DEVELOPMENT AND DELIVERY

The document describes the process of MOOC development and delivery under the following headings

- A. Proposal
- **B.** Development and Delivery
- C. Evaluation
- D. Course Credits & Credit transfer:

A. Proposal

The development of MOOC starts with NC inviting Expression of Interests (EoI) from academics / academic institutions. The Expression of Interest (EoI)

must be submitted in the form of the prescribed proforma downloadable as-<u>Forms for Expression of Interest and Detailed MOOC plan</u>. The proforma must be downloaded, duly filled and emailed to <u>cec.moocproposal@gmail.com</u>.

Review of Proposal- The Expression of Interest (EoI) and proposal shall be evaluated by a Subject experts Group (SEG) comprising of subject experts. The SEG will review each detailed proposal and recommend to the Academic Advisory Council (AAC) constituted by the National Coordinator (CEC) for approval.

Inviting Detailed MOOC development Plan:-

Detailed Proposal for MOOC development shall consist of the following and shall be submitted to the National Coordinator (NC) for approval:

i.	<u>Introductory</u>	Define the Course design, qualifications for
	<u>video/sample video</u>	taking the course, assessment system, credits to
		be awarded, and expected outcomes.
ii.	<u>Self-assessment</u>	Total number of quizzes and assignments to be
	<u>modules</u>	provided for the course and assignments and
		quizzes.
iii.	<u>Assessment system</u>	Weekly /biweekly assessments and assignments,
		quizzes and tests that would be required to be
		taken by the students.
iv.	Where Credits /	Stating that that Online Course is Cleared by a
	Certificate on the	University/ Institute.
	Course are to be offered.	That the University/ Institute agrees to issue
		certificate(s) and 'Transfer the Credits' to
	Consent letter / copy of	Registered Students under SWAYAM that are
	the resolution / minutes	existing as regular & enrolled students from a
	etc., signifying the	recognized University/Institute across the
	Institute has formal	country and shall follow, the UGC & AICTE
	approval of the	(Credit Framework for Online Learning Courses
	MOOC(s).	through SWAYAM) Regulation, 2016, a 'Gazette
		Notification' issued on 19th July 2016 & 17th
		August 2016, respectively.

The *Detailed MOOC development Plan* Format with instructions for filling the information is being provided in the document named - **Forms for Expression of Interest and Detailed MOOC plan**. Kindly download and duly

fill the form and mail to <u>cec.moocproposal@gmail.com</u> along with the Expression of Interest.

For further details of MOOCs development and delivery and other related matters please refer to Guidelines issued by MHRD in March 2016 and Revised Guidelines in June 2017. (Kindly refer the pdf document named **Guidelines Complied**)

B. Development and Delivery

Development of MOOC courses encompasses the production of instructional video lectures, creation of textual materials, lecture transcripts, assessment components etc. these aspects of production may be undertaken at suitable production facility {meeting infrastructure requirements as mentioned in the MHRD Revised Guidelines for MOOCs, dated June 2017- -(REFER 6.3. Production activities (8 weeks/ Online Course of the revised Guidelines)} (Kindly refer the pdf document named Guidelines Complied)

The production facility may be located at the Host University/Institute. Incase production facility is not available at Host University/Institute, Course Coordinator (CC)also can avail production facility for the accepted MOOC Proposals, at the CEC's Educational Multimedia Research Centres (EMRCs) located across India. (**List of Media centers As per Annexure IV**).

The delivery of MOOC shall comprise of schedule-wise release of video lectures and assessment. The IIIrd Quadrant-Discussion forum requires moderating the discussion forum time to time and conducting the Live interaction. These components are part of the SWAYAM platform and require NKN network/high bandwidth facility to conduct the live interaction through the portal.

Terms and conditions for Fund Release-

- 1. The funds will be released as per MHRD MOOCs Guidelines and Terms & Conditions issued by CEC.
- 2. The funds will be only released to Host University/Institutes and EMRCs for development of MOOC.
- 3. The MOOCs developer (Course Coordinator) would adhere to CEC/EMRCs Norms of payment structure for development of MOOCs.
- 4. Utilization Certificate of the Fund Release for development of MOOC has to be submitted to CEC.

C. Evaluation

Refer - Revised Guidelines for details -ASSESSMENT AND CERTIFICATION (Kindly refer the pdf document named **Guidelines Complied**)

- a) The CC shall decide the suitable assessment system for the course based on the stated learning outcomes, in consultation with the VC/ Registrar / Controller of examination/Dean Examination or any other equivalent authority at host University/ institution offering the course.
- b) Normally, the assessment shall have both formative assessment to promote deeper learning, critical thinking and reflection, in combination with summative assessments designed to gauge student achievement and/or performance. Summative assessments may include graded quizzes, reports or projects, peer assessments or proctored examination.

Whereas an online examination would be the preferred mode, the CC may decide on the mode of conducting the final examination.

- c) In case, a pen and paper final examination is to be conducted, the same shall be offered through any college/school volunteering to conduct the same. The decision in this respect will be taken by the host institution.
- d) After conduct of the examination and completion of the evaluation, the host institution shall award marks/grade as per the evaluation scheme announced, within 4 weeks from the date of completion of the final examination.
- e) On successful completion of each course, the host institution offering the Online Course would issue the certificate, along with the number of credits and grades, through which the student can get credits transferred into his/her marks certificate issued by his/ her parent institution.

D. Course Credits & Credit transfer:

As per the guideline for SWAYAM one course credit will be equivalent to 13-15 hours learning covering going through the course content, participating in discussion forums and other interactions, working on assignments and activities designated for the course etc. A 1 to 4 credit SWAYAM course is expected to be covered in 4-12 weeks' duration including the assessment component in which it should be 40 hours (total engagement time for 3 credit course) to 90 hours (total engagement time for a 6 credit course) for the full course consisting of learning from e-Content, reading reference material, discussion forum posting and assignment. Each module in a MOOC may be of 20-30 minutes duration and 8-10 modules are estimated to make one credit. (Refer to MHRD Guidelines March 2016). (Kindly refer the pdf document named Guidelines Complied)

For supplementing formal education under SWAYAM, UGC has already facilitated the credit transfer vide their Notification titled 'UGC (Credit Framework for Online Learning Courses through SWAYAM) Regulation, 2016', dated the 19th July, 2016. (Kindly refer the pdf document named <u>Guidelines Complied).</u> It has, with the objective of attracting the faculty to contribute to the MOOCs, also made provision to treat the development of

MOOCs as one of the parameters the points of which could be part of the scores under CAS. For further details please refer to the UGC Notification No. F.1-2/2016(PS/Amendment) dated 11th July 2016 published in Gazette on the same date. (Kindly refer the pdf document named **Guidelines Complied**)

Following items are to be emailed to <u>cec.moocproposal@gmail.com</u>, as per the checklist given below.

Checklist:

- 1. Expression of Interest
- 2. Detailed MOOC development Plan
- 3. Sample video
- 4. Consent letter- Consent letter if not available at the moment, then the Course Coordinator may kindly provide the date by which it will be submitted. The Consent letter is mandatory for course approval

216-D Shastri Bhawan New Delhi, dated 11.03.2016

Subject: Guidelines for Development and Implementation of Massive Open Online Courses (MOOCs) – reg.

The undersigned is directed to enclose herewith a copy of Guidelines for Development and Implementation of Massive Open Online Courses (MOOCs) for information & necessary action.

(K. D. Verma) Under Secretary (TEL) TEL No. 011-23073582

To.

- 1. Prof. Ved Prakash, Chairman, University Grants Commission (UGC)
- 2. Prof. Bhaskar Ramamurthi, Director, IIT Madras.
- 3. Prof. Rajbir Singh, Director, Consortium for Educational Communication (CEC)
- 4. Prof. Nageshwar Rao, Vice Chancellor (I/C) & PVC, IGNOU, New Delhi
- 5. Dr. Hrushikesh Senapaty, Director, NCERT
- 6. Prof. Chandra Bhushan Sharma, Chairman, National Institute of Open Schooling (NIOS)

Copy to:-

- 1. Sr. PPS to Secretary (HE), M/o HRD
- 2. Sr. PPS to Additional Secretary (TE), M/o HRD
- 3. PPS to JS & FA, M/o HRD
- 4. PS to Director (TE), M/o HRD
- 5. PS to DS (ICT), M/o HRD
- 6. Shri Pradeep Kaul, Sr. Consultant, NMEICT, M/o HRD

MOOCs Massive Open Online Courses An initiative under National Mission on Education through Information Communication Technology (NME-ICT) Programme

Guidelines for Development and Implementation of MOOCs

Ministry of Human Resource Development Department of Higher Education



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BACKGROUND AND PERSPECTIVE

Whereas, with a view to providing access to the best quality learning resources across the country, the project 'Study Webs of Active Learning for Young Aspiring Minds' (SWAYAM) has been started. SWAYAM provides an integrated platform and portal for online courses, using information and communication technology (ICT) and covering High School till all higher education subjects and skill sector courses to ensure that every student benefits from learning material through ICT. SWAYAM is a:

- 1. One-stop web and mobile based interactive e-content for all courses from High School to University level.
- 2. High quality learning experience using multimedia on anytime, anywhere basis.
- 3. State of the art system that allows easy access, monitoring and certification.
- 4. Peer group interaction and discussion forum to clarify doubts
- 5. Hybrid model of delivery that adds to the quality of classroom teaching.

Whereas, SWAYAM involves development of Massive Open Online Courses (MOOCs) compliant e-content (video and text) and building a robust IT platform. These guidelines pertain to the quality of the e-content produced for the SWAYAM.

Whereas, Under NMEICT, NPTEL (a group of 7 IITs and IISc) developed e-content in 23 Disciplines numbering 933 Courses. CEC has so far completed the development of e-content in 29 Undergraduate subjects and shall further be completing e-content in 58 Subjects in four quadrants. UGC is in the process of completing e-content in 77 Post Graduate subjects. Similarly, many other institutions are engaged in development of e-content.

Now, with a view for systematic development of the MOOCs for the SWAYAM, the following guidelines which propose to lay down technical and production standards for the e-content have been issued:

1. DEFINITIONS:

- 1.1. In these guidelines, unless the context otherwise requires, the following words shall have the following definitions:
 - a) 'Course' shall mean a paper, which is taught for at least one semester as a part of a subject/programme.
 - b) 'Four quadrant approach': the four Quadrant approach means e-learning system that has the following components:

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- Quadrant-I is e-Tutorial: which shall contain: Video and Audio Content in an organised form, Animation, Simulations, video demonstrations, Virtual Labs, etc.
- Quadrant-II is e-Content: which shall contain: PDF, Text, e-Books, illustrations, video demonstrations, documents and Interactive simulations wherever required.
- Quadrant-III is Web Resources: which shall contain: Related Links, Wikipedia Development of Course, Open source Content on Internet, Case Studies, books including e-books, research papers & journals, Anecdotal information, Historical development of the subject, Articles, etc.
- Quadrant-IV is Self-Assessment: which shall contain: Problems and Solutions, which could be in the form of Multiple Choice Questions, Fill in the blanks, Matching Questions, Short Answer Questions, Long Answer Questions, Quizzes, Assignments and solutions, Discussion forum topics and setting up the FAQs, Clarifications on general misconceptions.
- c) 'MOOCs': Massive Open Online Courses (MOOCs) are such online courses which are developed as per the pedagogy stated herein and following the four quadrant approach.
- d) 'National Coordinators (NCs)': National Coordinators are the Institutions that have been so designated by the Ministry and assigned with a specific sector to cater to MOOCs.
- e) 'Principal Investigator (PI)': The PI shall be a Subject Matter Expert (SME) belonging to a reputed educational institution, identified and entrusted with the task of developing MOOCs in a given area by the NC.
- f) 'Sector' shall mean a particular level of learning such as high school, engineering/non-engineering diploma/degree/post-graduation.
- g) 'Subject' shall mean a discipline (Example: Physics) taught in an educational institution consisting of specific programme/courses, resulting in the award of a certificate/diploma/degree.

2. NATIONAL COORDINATORS

2.1. The following shall be National Coordinators for each of the Sectors for the purpose of development of the e-content for SWAYAM:

S. No	National MOOCs Co- ordinator	Sectors
1	University Grants Commission (UGC)	Non Technology Post Graduation Degree Programme
2	NPTEL	Technical / Engineering UG & PG degree programme.
3	Consortium for Educational	Non Technology Under Graduation



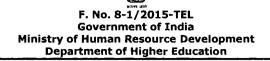
	Communication	degree programme.
4	IGNOU	Diploma and Certificates
5	NCERT	NCERT (classes 9 th to 12 th)
6	NIOS	Open Education (classes 9 th to 12 th)

3. SCOPE OF SWAYAM

- 3.1. The SWAYAM shall cover the following:
 - a) Curriculum based course contents covering diverse disciplines such as arts, science, commerce, performing arts, social sciences and humanities subjects, engineering, technology, law, medicine, agriculture etc. in higher education domain (all courses would be certification-ready in their detailed offering).
 - b) School education (9-12 levels) modules; for teacher training as well as teaching and learning aids to children of India to help them understand the subjects better and also help them in better preparedness for competitive examinations for admissions to professional degree programmes.
 - c) Skill based courses, which cover both post-higher secondary school skills that are presently the domain of polytechnics as well as industrial skills certified by the sector skill councils of various Ministries.
 - d) Advanced curriculum and professional certification under a unified scheme in higher education domain that can be tailored to meet the demands of choice based credit system (CBCS) currently being implemented in India at undergraduate level.
 - e) Curricula and courses that can meet the needs of life-long learners of Indian citizens in India and abroad.

4. AWARDING THE COURSES:

- 4.1. The National Coordinators (NC) shall ensure that work of converting a course into a MOOC shall be done in a comprehensive manner, such that there is complete coverage of all the courses in a subject/programme.
- 4.2. Each course in a subject shall be awarded to a reputed institution (defined as Principal Investigator) in such a way that there shall be no duplication of work.
- 4.3. The institution chosen to convert a course into MOOC (Principal Investigator (PI), shall follow the model curriculum prescribed by the Regulator. However, the curricula should be updated to cover all recent developments in the field, if the model curriculum is more than 5 years old.
- 4.4. The NC shall ensure that the PI engages the best of subject experts in the country.



4.5 'MOOCs National Committees (MNC)' consisting of Technical Experts, Academicians, Administrators etc., shall be constituted by the MHRD. Mission Director, NMEICT, shall chair the MNC. The MNC shall be an arch Committee to oversee the SWAYAM & MOOCs activity under MHRD, it shall be the Monitoring and Implementations Committee, to recommend funding requirement of NCs, approve projects submitted by the National MOOCs Coordinators & other PIs for implementation & funding by MHRD, establish & supervise Examination Centres, recommend weightage of MOOCs Courses in the conventional Teaching Programme, including Credit mobility across educational Institutions.

5. PROCESS LEADING TO DEVELOPMENT OF e-CONTENT

- 5.1 The National Coordinator ensures that the best teacher in the Country is selected to work as the 'Principal Investigator' or 'Subject Matter Expert (SME)'.
- 5.2 Each PI/SME will identify his/ her team of teachers with proven abilities and allocate modules to them.
- 5.3 The selected teachers, if necessary, are trained in a Workshop on the modalities and the quality standards for recording, which include:
 - a) Defining the Course design, pre-requisites and expected outcomes
 - b) Splitting the course into weeks and short modules
 - c) Preparing quizzes for each lecture for self-testing
 - d) Weekly assessments and assignments
 - e) Discussion forums to answer questions online.
 - f) Practice offering of MOOC for training and course delivery.
- 5.4. The team prepares the content, based on the model curriculum prescribed by the Regulators; updated with the recent developments in the field. In the case of a new course, a team of experts will arrive at a suitable curriculum. This may involve repurposing the e-Content created elsewhere.
- 5.5. Studios are allocated for recording and for creating multimedia for the course. Each module normally takes a week to prepare.
- 5.6. The National Coordinator should put in place a system for pre-viewing the econtent created by experts and stakeholders.

6. TECHNICAL SPECIFICATIONS FOR CONTENT DEVELOPMENT

6.1. A SWAYAM Course shall be classified based on number of weeks of engagement and number of hours of video. A Course shall be about 40 Hours of duration that includes about 20 Hours Video and multimedia e-Content deliveries. The production process of content / e-Content development should meet highest industry standards, both in technical and academic terms. All



Implementing Agencies shall therefore ensure that the Technical Guidelines are strictly followed and should use professional equipment, with very good quality cameras and editing units. Following technical guidelines shall be followed:

- a) The content like Assignments, Glossary, downloadable PDFs, and DOCs etc. should be saved in database directly in binary formats. This will add content utility transforming it from static to dynamic for future warehousing purposes. This will facilitate revisions dynamically via database to allow regular updation and help in using the advanced text search engine facilities present in all enterprise level databases.
- b) Content should be developed in an open platform with a combination of HTML 5 + Angular JS based engine template. Animations already created in applications such as Flash need to be imported in the e-Content. Even though animations get created in applications such as Flash they need to be imported in the e-Content.
- c) The Cameras and the Recorder used, shall follow at least the following standards: Three 1/3" type; Full HD CMOS sensors; PAL color, CCIR-B standards; HDTV 1080/50; Gross Pixels > 2 Million; camera to have a resolution of 750 TVL or better; Proxy Video: MPEG-4 AVC/H.264, 3.5 Mbps MP4; Aspect Ratio 16:9; Audio: AAC 2ch, 16bit, 48kHz, HD/Standard Definition DV Recording.

6.2. Editing processes & Standards.

- Video recording format: Full HD 1920x1080 pixels.
- Videos aspect ratio: 16:9 (widescreen).
- Module Delivery: 1920p following MPEG-4 AVC Compression.
- Audio Channel 1 to have Mixed Audio Track.
- Font size: Heading: 24-30; Sub-heading: 22-26; Body: 20-24;
- Full screen Video Frame.
- All graphs and diagrams must have clear font.
- The expert/teacher should speak extempore as delivery made in case of classroom set-up and avoid reading from written material or a Teleprompter.
- Video frame to maintain 6-8% headroom;
- Video quality and Audio levels should be constantly monitored while recording.
- PI should provide two video files, one in raw format and other in compressed format.
- Voice modulation be taken care of and the voice should remain same throughout the video as in a classroom situation. Two voices in the same video for lecture and slides may be avoided. However, video clips or audio clips from eminent experts can be used.

7. RESPONSIBILITIES OF SUBJECT MATTER EXPERT (SME)

7.1. The following shall be the responsibility of the SME:

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- SME should provide PPTs of at least 25-35 slides before the recording. Provide relevant images, storyboard, animations, graphics etc., before recording.
- Text files in a Course shall be sufficient to bring in all material required by an average student and shall be around 3000 words for one hour content.
- Instructional designer may also be involved for incorporating multimedia inputs.
- It is not necessary that the teacher in camera be shown thought, however, the teacher in camera may appear upto 25% of the time, rest of the time, the timeline may carry teacher's voice on which graphics, animation, text etc may be inserted.
- Faculty presenting the video should come prepared for recording and speaks slowly on recording; speak extempore like deliveries in a classroom; use of Teleprompter may be avoided; the SME should review the modules before and after recordings.

8. RESPONSIBILITIES OF MULTIMEDIA LAB

- 8.1. The following activities are to be carried out by the multimedia labs:
 - Transform the presentation slides to standard template provided by the MHRD and use standardized fonts, colours, text etc.
 - Provide Instructional designing; add general images from stock, graphics, animations etc., (as per the need)
 - Should record with high quality (1920X1080) video and excellent quality noise free audio. All the Video's must have 16:9 Aspect Ratio (widescreen).
 - Video quality and Audio levels (in 0 db) should be constantly monitored while recording.
 - Submission of content in raw as well as compressed file in hard disk is to be provided.

9. REPURPOSING THE E-CONTENT

- 9.1. All courses from School level to the Post-graduate level created under NMEICT, NIOS, NCERT, UGC etc., in the form of e-Courses with interactive e-Content shall be made available to e-Acharya for use in SWAYAM programme. Available content will need to be repurposed into MOOCs compliant format and hosted on the SWAYAM platform. This will comprise more than 2.5 lakh hours of course content. The repurposing consists of the following:
 - a) <u>Adding four Quadrants</u>, and sufficient numbers of auto-graded quizzes, assignment, case studies, field exercises to the e-content already developed under NMEICT.
 - b) Indicate the purpose of the course (each paper to be considered as a course) and the target audience.



- c) Indicate the objectives for offering the course along with the pre-requisites for determining eligibility to enroll in the MOOCs course.
- d) Sequencing the modules prepared for a specific paper (course) so that the course flows in a proper order.
- e) Adding a five-minute video by the course coordinator (who may be identified for offering the MOOCs course) to give the course overview, while summarizing the course contents, objectives, pre-requisites and learning outcomes.
- f) Specify broad learning outcomes of the course (paper).
- g) Indicate assessment and evaluation procedure.
- h) <u>Translation of content into regional languages</u>: Efforts shall be made to transcribe videos to enable translation of all text and then dub the voice; in as many Indian languages as possible. For this purpose, the services of Bharatvani, CIIL & other institutions can be used.
- i) The PI may keep discussion forum activities ready to be released at the time of MOOCs launch.

10. FEATURES OF MOOCS COMPLIANT E-CONTENT

10.1. The MOOCs compliant e-Content shall follow a standardized template (which will be provided by the MHRD). Uniform look and feel is required to be followed by all PIs and shall also have instructions on logo etc.

Pre- Planning Requirements

- 10.2. Before MOOC content is created, the following pre-planning steps are critical and must be taken care of:
 - a) Identify the purpose of the course and the target audience.
 - b) Create a timelines with detailed tasks to be accomplished.
 - c) Identify the objectives for offering the course, along with pre requisits.
 - d) Determining the optimum time frame for the course, and conceptualizing a course design (such as open, structured, or non-linear) and release format (for examples releasing all the content at launch or releasing it on a week-by-week basis).
 - e) Specify broad learning outcomes.
 - f) Decide assessment strategy and the level of achievement to be considered acceptable for receiving a course completion certificate.

Core Elements of a MOOCs

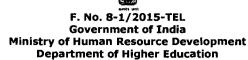
10.3. Elements for the overall course should include:



- a) Syllabus Template (including a course description with key learning outcomes, descriptions of faculty, a detailed course content outline, expectations for participation, certification, and faculty communication, netiquette guidelines, and academic integrity).
- b) Pre- and post-course surveys
- c) Course overview to orient students on: What is the course about? What does the course include? What will I learn in the course? How do I use the course features?
- d) Course timeline for scheduling learning activities (week-wise detailed plans)
- e) List of Announcements to deliver reminders for due dates and course transitions.
- f) Instructions on synchronous and asynchronous engagement (prompts for students to post in the Discussion Forum, polling questions throughout the course, interaction with faculty/ TA (eTutor) as per instruction)
- 10.4. Elements for the course Landing Page must include the following:
 - a) Welcome text and video from lead faculty,
 - b) Faculty/ TA (eTutor) details (brief CV and contact details),
 - c) Links to course surveys,
 - d) Guidance on how to get started as a student in the course,
 - e) Handouts section including syllabus and learning checklist,
 - f) Course Timeline.

Section-level Course Structure

- 10.5. Each course may be divided into week wise sections as per the course plan. Each week of the course to comprise a lesson with a single topic or themed topics with specified learning outcomes. A 1 to 4 credit SWAYAM course is expected to be covered in 4- 12 weeks' duration including the assessment component in which (it should be 40 hours (for 3 credit course) to 90 hours (for a 6 credit course) for the full course) of learning from e-Content, reading reference material, discussion forum posting and assignment. Faculty will need to work out lesson plan for each week with the following components:
- a) Introduction including learning outcomes.
- b) Direct instruction delivered primarily through transcribed video content with learning objectives and faculty-provided notes. Uniquely-created handouts may also be used for direct instruction, supporting e-Content with graphics and animations, case-studies wherever essential
- c) Provide list of core and supplementary reading list. Other course resources may be provided via Web links
- d) Auto-graded quizzes, Self-assessment questions where students compare their answer against an instructor-written response and grade themselves

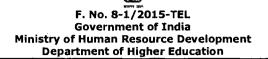


- e) Discussion threads can be used to effectively engage students, who may communicate in discussion board threads each week on key course concepts. These discussion forums are best focused on a case study, problem, or question(s) pertinent to the lesson and should allow participants to share ideas and debate topics
- f) For lessons in which students can appropriately practice skills or concepts, short interactive tools/ social media can effectively supplement other course material
- g) Aligned formative assessment questions for each week's lesson comprising both objective questions (such as multiple choice, multiple mark, numerical input etc.) as well as subjective questions. Formative assessments may include ungraded reflection papers, quizzes that can be re-taken, discussion forum responses, concept-maps, as well as self- and peer evaluations that are meant to help student improve or identify gaps and weaknesses.
- h) Conclusion and Forthcoming section to include week's summary and what to expect next week.
- i) Feedback mechanism for faculty and/or TA to respond to the questions from students.

10.6. Week Plan Template:

The following is the suggested week plan template for a MOOCs:

Content	Activities	Assessment					
Video/s	Assignments	Quiz					
Multimedia e-content (inclusive	Discussion	Peer Assessment					
of graphics/ animations/	Practical assignment (as per	Any other					
scenarios/ case-study)	requirement)						
Textual Handout	Any other						
Reading list (core and							
sup plementary)							
Week 2: Introduction, Learning Outcomes							
week 2. Introduction, Learning	Outcomes						
Content	Activities	Assessment					
	,	Assessment Quiz					
Content Video/s	Activities Assignments						
Content Video/s Multimedia e-content (inclusive	Activities Assignments	Quiz					
Content Video/s Multimedia e-content (inclusive	Activities Assignments Discussion	Quiz Peer Assessment					
Content Video/s Multimedia e-content (inclusive of graphics/ animations/	Activities Assignments Discussion Practical assignment (as per	Quiz Peer Assessment					
Content Video/s Multimedia e-content (inclusive of graphics/ animations/ scenarios/ case-study)	Activities Assignments Discussion Practical assignment (as per requirement)	Quiz Peer Assessment					



Hosting the e-Content

10.7. All content in the form of MOOCs & e-Content being developed under NMEICT/MHRD shall be hosted at 'National Integrated Portal (NIP)' (also called e-Acharya) a Data Centre hosted at INFLIBNET, Gandhinagar. The NIP shall be linked to NME-ICT Cloud called 'Baadal' hosted at NIC, which shall be upgraded to support 3 Crore users, with a 10 Lakh concurrent connections. The up gradation of 'Baadal' shall include establishing additional Data Centres and adding CDN system to deliver the video content, so that the system would be geared up to meet the massive demand for e-Content.

11. INSTRUCTIONAL SYSTEMS for DESIGN OF MOOCS

11.1. MOOC design and development needs to be carried out by the following instructional systems design principles. The systematic and logical steps of any instructional system design are:

A) Analysis:

- Need analysis: Need of offering the course via MOOC, possible target reach
 and significance of the courses is to be established so as to justify selection of
 courses for the MOOC.
- **Content analysis:** Preparing raw content with the use of reference books, articles, research papers, collection of illustrations, diagrams, etc.
- **Learner analysis:** Defining prospective learner profile, essential entry knowledge.

B) Design:

Course Outline: (Main and sub-topics). Structure of topics, sub-topics with appropriate sequence in hierarchical manner will be output of this exercise.

- C) **Objectives:** Course Objectives, Module Objectives in terms of Performance Outcomes will be output of this task. Performance objectives may be many and each objective will express learner's achievement only in one small area.
- D) **Instructional Strategies:** Specific learning activities for effective training (e.g. case-studies, scenarios, cartoon-strips, analogies, individual or group activities, concept-mapping, in-text learning quizzes, interactive exercises within learning modules, discussion forum topics, blog-postings, etc.) will be planned at this stage. Treatment of MOOC will mainly depend on the planning of this stage.
- E) Instructional Material: Nature of Material in light of designed strategies will be planned at this stage. The material may comprise instructor's videos supported with slides, interactive multimedia consisting of graphics, animations, documentaries, recorded demonstrations, dramatized scenarios,





cartoon strips, 3D models and animations, info-graphics, diagrams, sketches, maps, screencast videos, slides with audio narration, etc.

- F) Summary: Summary in innovative formats (e.g. Info-graphics such as concept-maps, flow-charts, sum-up videos, text-based summary, etc.)
- G) Evaluation Strategies: Specific assessment and evaluation exercises, activities for formative assessments and module-end exercises, summative auto-graded tests, assignments for self-check and assignments for eTutor feedbacks will be planned at this stage.
- H) Detailed time-wise Course Session Plan to define week-wise activities will be designed once all strategies and material is finalized. Here, mapping all content, activities, tests with time-line will be done. Final selection of activities, assignments, tests will be done only in the light of available time duration for each module. Available time duration will depend on the credits assigned to the course and its modules in the syllabus.
- I) Implementation: Actual Implementation with the proper announcement of course, availability of detailed course documents will be done only after all of the above stages are systematically carried out.
- J) Duration of the course: The duration of courses will vary depending on the level and credit points. Courses in any one of the following formats may be offered:
- 4-10 weeks for shorter courses for 2 to 3 credits at certificate level or for teacher training programme.
- 12-16 weeks for CBCS programmes with faculty/mentor support from participating institutions/affiliations of 4-to 6 credits at diploma, UG and PG level.
- 11.2. One credit will be equivalent to 13-15 hours learning covering going through the course content, participating in discussion forums and other interactions, working on assignments and activities designated for the course etc.
- 11.3. Each week learning activities will cover going through eContent, supplementary reading. The lectures/ topics are to be broken up into short modules. Each module will have the following components:
 - A clear description of its contents and expected learning outcomes.
 - Objective-type assessments (to be auto-graded or assisted by Teaching Assistants (TAs)/Mentors as the case may be)
 - Activity/ assignment
 - A discussion topic discussed extensively in the course discussion forums.
- 11.4. A team of Instructional Designers may assist SMEs (Subject Matter Experts) for designing systematic instruction based on raw content, activities and exercises provided by instructors. A team of graphics and multimedia designers

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may assist in creation of graphics and multimedia. These teams can work inhouse strengthening institute's eContent development skills.

12. FINANCING THE MOOCS

12.1. The MHRD would finance the creation of MOOCs Compliant fresh e-content as per the 4-quadrant approach as given below:

S/No	Activity	Repurposed Content	Fresh Content	Remarks
1	Cost of a course. Cost includes videos recording & editing totaling 20 hours, quizzes, answer keys, subject additional links, additional notes and transcript of the text of all videos in English.	Rs 6.0 lakh	Rs. 9.0 lakhs	An existing NPTEL /UGC or other 40-hour course can be usually offered as two MOOC courses connected back-to-back for credit transfer with institutions.
2	Coordinator honorarium for preparation.	Rs. 2.0 lakh.	Rs. 2.0 lakh.	One-time payment
3	Coordinator Honorarium for running the Course (1 st time): for the content creator and the faculty offering the course.	Rs. 1.0 lakh.	Rs. 1.0 lakh.	
4	Coordinator Honorarium for subsequent running of the course (after the 1 st time).	Rs. 1.5. lakh	Rs. 1.5. lakh	Teacher presence and monitoring of active learning needed until exams are conducted and certificates issues. Threemonth participation.
5 (a) or	TA / mentor honorarium (500 active registrants, one TA for two months), 5000-10,000 active registrants, 5 TAs.	Rs. 0.3 lakh	Rs. 0.3 lakh	Assumption: less than 10 percent of active learners participate in discussion
(b)	For a course having 10,000 to 20,000 registrants effective monitoring of website and discussion forums is the main job.	Rs. 1.5 lakh	Rs. 1.5 lakh	and raise questions, doubts, request additional learning material etc.
6	Course Examination fee. Tendering possible for identification of centres where simultaneously more than one exam can be conducted.	Rs. 1000 per candidate per course unless tenders are floated.	Rs. 1000 per candidate per course unless tenders are floated.	GATE model is the working model- tender for a limited period of time is used to award contract for online exam services and scanning and storing of answer sheets for evaluation by humans if



				necessary.
7	Course Reviewer Honorarium. Two reviewers, both of whom peers and academic faculty with reputation and with experience in the area	Rs. 15000 per course.	Rs. 15000 per course.	Reviewer panel will be nominated by the subject-specific committees constituted for MOOC.
8	Human Resource support for Course. Not more than 5 technical project staff for supporting the course management	Rs. 2.0 lakhs per institute offering 20 or more MOOC courses at a given time.	Rs. 2.0 lakhs per institute offering 20 or more MOOC courses at a given time.	It is an administrative expense and must be approved each time by the national committee recommending MOOC programmes.
9	Workshops About 5-10 workshops are immediately needed for updating faculty with tools and technologies for certification online. 60 to seventy five participants, restricted to those who travel from within 200 -300 km radius of the site for workshop	Rs. 5 lakhs per workshop, or pro rata	Rs. 5 lakhs per workshop, or pro rata	Three days, including travel, honoraria for organizing team (Faculty, mission staff and mission consultants who are involved in the organization) and contingent expenses.

13. GUALITY ASSURANCE

- 13.1 Quality, one of the key elements of MOOCs, shall be monitored throughout the design, development and delivery cycle of the MOOCs. Quality shall be managed at the offering institution / MOOCs offering team level while creating the content.
- 13.2. Quality assurance at the individual institution/ MOOCs team level shall have:-
- Content checks to be ensured while developing the course content for plagiarism and source of information.
- General course curriculum/standards to be followed for the credited courses while ensuring that updated knowledge is being imparted to the students.
- Suggested course plan for better management.
- Suggested language and formatting style and suggested image pools to be used.
- Suggested production parameters and video quality parameters.
- Suggested assessment types and style.
- 13.3. Overall quality assurance before scheduling the course for delivery shall have:
- Final typos and grammar checks.
- Video quality checks.
- Brand language/ message (i.e. in keeping with MOOCs guidelines).
- Pedagogy and learning experience.

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- Formatting of text and images.
- Ensuring the presence of basic MOOCs elements like video/e-Content, discussion forums, Interactive elements, assignments, assessment methodology etc.
- 13.4. While building a MOOC on SWAYAM, course team shall take care of the following aspects:
 - Accidental mistakes, integrity of content, outdated information, inaccuracies and inconsistencies in the videos and other course content.
 - Double-check the veracity of the answers to questions with determined answers (e.g. multiple choice, dropdown etc.) with regards to assessments.
 - Check that all author names, readings, etc. are accurately represented on course resource pages and other content.
 - Check for any broken links, missing pages, images, multimedia component both at course as well as content level.
- 13.5. Quality assurance and testing of the completed course shall be put in place in the SWAYAM platform. This will include running through a trial version of the course to check for any misplacements of content, functionality of all interactions, and functionality of all links.

14. INTELLECTUAL PROPERTY RIGHTS / COPYRIGHT HANDLING

- 14.1. The course team will have to obtain copyright clearance for any readings, images, and video clips used as core and supplementary reading in case of licensed material if used. Until clearance has been obtained, direct references to specific materials should be avoided in video content or other course material.
- 14.2. All contents (text, audio, video, animation, quiz etc.) developed with the funding of NMEICT will be the property of SWAYAM. However, the content created prior to the issue of these guidelines shall continue to follow the provisions of the agreement under which such content has been created.
- 14.3. All courses and contents posted in SWAYAM will be copyrighted to SWAYAM. Ministry will, from time-to-time, announce policies for access and charges if any (for certification) and will also publish appropriate Open Educational Resources policy in consultation with other national and international bodies.
- 14.4. The terms of service should be clearly laid out so as to address the following key points by the PI:
- Any disclaimers should be clearly spelt out.
- User /student/ institutions should be informed about the usage rights of the course content available on SWAYAM.



15. ASSESSMENT AND CERTIFICATION

- 15.1. The decision to use different types of assessments should be based on the stated learning objectives and shall be taken by the PI offering the course. Ideally, courses will offer both formative assessment to promote deeper learning, critical thinking and reflection, in combination with summative assessments designed to gauge student achievement and/or performance. Summative assessments may include graded quizzes, reports or projects, peer assessments or proctored examination.
- 15.2. The assessment strategy should align with learning outcomes shall be clearly spelt out. It should include relevant assessments (exercises, in-lecture quizzes, post assessment quizzes, etc.) along with their respective weightage. It should also lay down methodology for holding a proctored examination in case of credit-based courses.

Assessment Options

- 15.3. Some Homework and Assessment Options are
- Multiple choice test if applicable (quiz tool)
- Homework assignment (quiz or programming assignment)
- Write a commentary, review, comparison, analysis, and observation within your community, reflection or other for homework (peer assessment).
- Response to a text, video or other media object for homework (peer assessment).
- Prepare a presentation on X and upload (text, photo, video, PPT).

Peer Assessment

15.4. Peer Assessment can be an important element of student assessment. The courses which plan to use peer assessment should develop a rubric which aligns with learning outcome. Here we have an example which lists the dimensions of rubric for reflective writing piece.

Example dimensions for a reflective writing piece

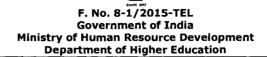
- Depth of reflection
- Use of textual evidence and historical context
- Language use

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15.5. Learners can get a certificate after they have attended the classes and submitted the assignments/quizzes. For credit-based courses, an accepted and approved evaluation format in alignment with CBCS or any other system that UGC, AICTE, etc. may implement from time to time, with a term/semester end proctored examination, ideally at the computer lab of the institution where the students is

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enrolled or at an institute close to the one where the student is enrolled. The exam may be conducted nationwide through an exam partner. Learners can get a certificate after they have registered for, written the exam and successfully passed. The online assignments/quizzes may carry weightage in the final consolidated score.

- 15.6. The service providers of MOOCs will offer the courses free through open access mode but charge for the service of proctored examination. This practice will be followed in this until such a time new policy announcements are made. A certifying body for each discipline will be created by HRD with the help of participating institutions. It is recommended that the Institutions which offer the course will follow a general requirement and issue certificates with their names and the SMEs on each certificate with SWAYAM explicitly appearing on the logo of the certificate and the Ministry's support to the project and guidance being endorsed.
- 15.7. Efforts must be made to include industry or industry bodies as partners in the certification process. This creates important added value for the students. Wherever possible, education and R & D team members from the industry need to be included in the design of course contents and problem sets. However, problems may be of a generic nature and specific practices of participating industries should not be used as contents.

Conducting the Examination

- 15.8. SWAYAM organizing /implementing team will designate staff for the conduct of proctored exams and will take care of the logistics of conducting the certification exam. About 1000 Centre shall be established to conduct SWAYAM exams across the country. The faculty will have to create at least one question paper for the mock exam and one or more equivalent examination papers for the final certification exams.
- 15.9. A proctored exam by definition is an exam that is administered by an individual who supervises the student while they are taking the exam. The proctor's function is to ensure the integrity and security of the exam in a secure environment. To ensure the validity and acceptability of the CBCS credits offered by the Credit offering Digital online courses (MOOCs) a scheme of Final proctored exam, with assigned weightage as per assessment design, can be used in final assessment of the students.
- 15.10. The MOOCs platform will have the following facilities for the proctored exam:
- Student can be prompted to register for the proctored test via a registration link available on the course Assessment page on SWAYAM platform.



- The procedures for registration for the Proctored exam can be kept simple and self-explanatory with minimum required details from student end.
- The Exam proctoring/ conducting charges and fee structure should be explained to the student in advance via the course page and introductory video.
- Provision for offline mode(s) of payment should also be kept for the students who prefer offline payment and receipt.
- Provisions for Rescheduling and Canceling the Exam should be provided to the student and Course instructor both. Proper email communication channels can be employed to immediately inform of the exam schedule changes.

15.11. A set of institutions/ Universities/ Colleges who would be part of the MOOCs initiative can also offer to proctor the exams. This can provide an option for the pan India coverage, including remote areas. Student can select his/her center from the available institutions for exam. An agency or a set of central professional proctoring agencies can be given the contract to proctor the exam for all the MOOCs offered on the SWAYAM platform.

Certification and Credit Sharing

15.12.On successful completion of each course, the institution offering the MOOCs course would issue the certificate, along with the number of credits and grades, through which the student can get credits transferred into his marks certificate issued by his parent institution.

15.13. Guidelines for credit sharing will be issued by concerned Regulators such as UGC, AICTE, etc. for consideration by various Institutes. There may be standard norms for the host Institution to conduct the course that may include continuous evaluation through assignments, online quizzes, case studies, online writing exercises, term examinations, student feedback, online forum management, etc. Results should be declared within one month of the completion of the Course. Priority can be given to students taking the course for credit over those who participate for learning only.



Guidelines for developing Online Courses for SWAYAM

1st June 2017

Government of India
Ministry of Human Resource Development
Department of Higher Education





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BACKGROUND AND PERSPECTIVE

Whereas, with a view to providing access to the best quality learning resources across the country, the project 'Study Webs of Active Learning for Young Aspiring Minds' (SWAYAM) has been started.

Whereas, SWAYAM provides an integrated platform and portal for online courses, using information and communication technology (ICT) covering High School till all higher education subjects and skill sector courses to ensure that every student benefits from learning material through ICT;

Whereas, SWAYAM is a:

- 1. One-stop web and mobile based interactive e-content for all courses from High School to University level.
- 2. High quality learning experience using multimedia on anytime, anywhere basis.
- 3. State of the art system that allows easy access, monitoring and certification.
- 4. Peer group interaction and discussion forum to clarify doubts
- 5. Hybrid model of delivery that adds to the quality of classroom teaching.

Whereas, SWAYAM involves development of Massive Open Online Courses (MOOCs) compliant e-content (video and text) and building a robust IT platform;

Whereas, in order to disseminate educational content to masses, the MHRD has launched 32 Direct-To-Home (DTH) educational TV channels called "SWAYAM Prabha" broadcasting education content 24x7 basis, and the content developed under SWAYAM would be used for transmission in SWAYAM Prabha (SP) DTH channels.

Whereas, there is a need for synergizing the quality of contents on these platform, and for standardizing the content delivery;

Now, with a view for systematic development of the online courses for the SWAYAM, the following guidelines which propose to lay down technical and production standards for the e-content have been issued:

1. **DEFINITIONS:**

- 1.1. In these guidelines, unless the context otherwise requires, the following words shall have the following definitions:
 - a) 'Academic Advisory Council (AAC)', shall mean a group of academicians of repute identified and appointed by the National Coordinator with the mandate of identifying the CCs, examining the course proposals and approving them.
 - b) 'Course Coordinator (CC)': The CC shall be a Subject Matter Expert (SME) belonging to a reputed educational institution/Industry or a specialist in the field identified and entrusted with the task of developing online course in a



given area by the NC.

- c) 'Course' shall be of two types: credit courses and non-credit courses.
 - i. Credit Course shall mean a course which is taught for at least one semester as a part of as subject/programme.
 - ii. Non-Credit Course shall include courses like awareness programme, continuing education programme or training of specific skill set as independent course, which are not part of any set curriculum. It can be of shorter duration.
- d) **Four quadrant approach**: The four Quadrant approach means e-learning system that has the following components:
 - i. Quadrant-I is e-Tutorial; which shall contain: Video and Audio Content in an organized form, Animation, Simulations, video demonstrations, Virtual Labs, etc, along with the transcription of the video.
 - ii. Quadrant-II is e-Content; which shall contain; self instructional material, e-Books, illustrations, case studies, presentations etc, and also contain Web Resources such as further references, Related Links, Open source Content on Internet, Video, Case Studies, books including e-books, research papers & journals, Anecdotal information, Historical development of the subject, Articles, etc.
 - iii. Quadrant-III is the Discussion forum for raising of doubts and clarifying them on a near real time basis by the Course Coordinator or his team.
 - iv. Quadrant-IV is Assessment, which shall contain; Problems and Solutions, which could be in the form of Multiple Choice Questions, Fill in the blanks, Matching Questions, Short Answer Questions, Long Answer Questions, Quizzes, Assignments and solutions, Discussion forum topics and setting up the FAQs, Clarifications on general misconceptions.
- e) **Host Institute**, Educational Institute offering the MOOC and conducting end examination, awarding credits and certification.
- f) **'MOOCs'**: Massive Open Online Courses (MOOCs) are such online courses which are developed as per the pedagogy stated herein and following the four quadrant approach.
- g) 'National Coordinators (NCs)': National Coordinators are the Institutions that have been so designated by the Ministry and assigned a specific sector for preparation of online courses for SWAYAM.
- h) **Parent Institute**, **I**nstitute to which student registered for MOOC is enrolled.
- i) 'Sector' shall mean a particular level or discipline of learning allotted to a NC by the MHRD.
- j) 'Subject Matter Expert Groups (SMEGs)'shall mean a group of reputed academicians in a particular subject identified by the National Coordinator in each subject.
- k) **'Subject'** shall mean a specific area under a discipline (Example: Physics) taught in an educational institution consisting of specific programme/ courses, resulting in the award of a certificate/ diploma/ degree.
- I) **'SWAYAM Academic Board'** shall be a apex academic body that would lay down standards of quality for the courses to be offered through SWAYAM.
- m) **'SWAYAM Board'** shall be the Authority that would be overall in-charge of the formulation of the Platform, prescribe quality of content and facilitate conduct of examinations.



2. SWAYAM Board

SWAYAM Board (SB) shall be the Body for managing the SWAYAM and SWAYAM Prabha by coordinating the work of technical and academic bodies so as to deliver high quality online education.

- a) <u>Composition</u>: The Board shall have the following membership:
 - i. Secretary (Higher Education) Chairperson
 - ii. Chairperson UGC
 - iii. Chairperson AICTE
 - iv. (5) Bureau heads from the Ministry of HRD (ex-officio) looking after: Technical Education, Management Education, Higher Education, School Education, Open/Distance Education
 - v. All National Coordinators of SWAYAM and SWAYAM PRABHA
 - vi. JS&FA of MHRD
 - vii. Mission Director NMEICT (Member Secretary)
- b) <u>Functions</u>: The SB shall discharge the following functions:
 - i. Take decisions for smooth running of SWAYAM and SWAYAM PRABHA platforms.
 - ii. Lay down Policy regarding implementation issues including: cost payable for development and delivery of the courses, examination fees, accepting the content from foreign/private institutions/universities, within parameters laid down by the competent authority.
 - iii. Review the progress of each NC pertaining to sanction, progress, development and delivery of various online courses.
 - iv. Any other matter that has arisen during the operation and delivery of SWAYAM and SWAYAM Prabha.
- c) <u>Secretariat</u>: The SB shall have a secretariat located in AICTE/ MHRD for servicing the Board, composition of which would be decided by the Board.

3. SWAYAM Academic Board (SAB):

- (1) There shall be a SWAYAM Academic Board responsible for guiding the National Coordinators and for laying down quality standards. The SAB shall be constituted as follows:
 - i. Chairman UGC Co Chairperson
 - ii. Chairman AICTE Co Chairperson
 - iii. Two technical experts nominated by the Ministry
 - iv. Two reputed academicians nominated by the Ministry
 - v. Two representatives from the Industry, one each nominated by MSME and Ministry of Skill Development
 - vi. Director AICTE Member Secretary
- (2) The SAB shall discharge the following functions:
 - i. Monitor the quality of the courses on the SWAYAM and lay down quality standards.
 - ii. Offering of courses on SWAYAM
 - iii. Integration of SWAYAM and SWAYAM Prabha
 - iv. Monitor the progress of conduct of the end-term examinations



for the SWAYAM courses and resolve issues if any.

v. Monitor the progress of transfer of credits and resolve issues if any.

4. NATIONAL COORDINATORS

4.1. The following shall be National Coordinators for each of the Sectors for the purpose of development of the e-content, delivery of online courses and overseeing the assessment procedures of courses offered on SWAYAM. However, the Ministry can add National Coordinators from time to time depending on the need for expanding the Courses to be offered:

S. No.	National MOOCs Co- ordinator	Sectors
1	University Grants Commission(UGC)	Non-Technology Post Graduate Degree Programmes.
2	NPTEL	Technical / Engineering UG & PG degree programmes.
3	Consortium for Educational Communication	Non Technology Under Graduate Degree programmes.
4	IGNOU	Diplomas and Certificates programmes
5	NCERT	School Educational Programmes from Class 9 th to 12 th .
6	NIOS	Out of school children Educational Programmes from Class 9 th to 12th.
7	IIM Bangalore	Management programmes.
8	NITTR, Chennai	Teacher Training programme.

5. SCOPE OF SWAYAM

- 5.1. The SWAYAM shall cover the following:
 - a) Curriculum based course contents covering diverse disciplines such as arts, science, commerce, performing arts, social sciences and humanities, engineering, technology, law, medicine, agriculture etc. in higher education domain (all courses to be certification-ready).
 - b) School education (9-12 levels) modules; for teacher training as well as teaching and learning aids to learners to help them understand the subjects better and also to help them in better preparedness for competitive examinations for admissions to professional degree programmes.
 - c) Skill based courses, which cover both post-higher secondary school skills that are presently the domain of polytechnics as well as industrial skills certified by the sector skill councils of various Ministries.
 - d) Advanced curriculum and professional certification under a unified scheme in higher education domain that can be tailored to meet the demands of Choice Based Credit System (CBCS) currently being implemented in India at under graduate level.
 - e) Curricula and courses that can meet the needs of life-long learners.



f) Independent courses which may not be part of any set curriculum and may be taught as awareness courses, continuing education programme and for training of specific skill sets.

6. Creation of online courses for SWAYAM:

6.1. Identification:

The National Coordinators (NC) shall ensure that work of converting a course into a MOOC shall be done in a comprehensive manner, such that there is complete coverage of all the courses in a subject/programme.

- a) The NC shall identify courses where online education is possible and preferred. The identified courses shall be advertised in newspaper and other media calling for Expression of Interest (EoI).
- b) In all identified courses, **Expression of Interest** (EoI) can be invited for credit courses from CC through recognised Universities/ Institute of National Importance and other educational Institutions authorized to award degrees/credits and from subject specialists both in Public and Private Sectors for non-credit courses.
- c) The CC while submitting the expression of interest (EoI) shall also submit an undertaking from a Host University/Institution conveying its willingness to offer the course for credit, conduct examination, assessment, evaluation, issue certificates and transfer the credits to the students of the Parent University/Institution as per the UGC/ AICTE/any other regulatory body Regulations issued for the purpose.
- d) After evaluating the EoI received, the NC shall identify a Course Coordinator (CC) for each Course, based on (i) the quality of the sample content, (ii) reputation of the expert/ institute and (iii) teaching-learning methods proposed, and invite him/her to prepare the MOOC within 6 months from that date.
- e) The NC shall ensure that no further courses are allotted to a CC unless he/she has successfully completed a course allotted earlier.
- f) In case two or more CC from the same Institution drop / discontinue courses at a given time, the host Institute shall be denied further participation for a stipulated time.
- g) In case, the selected CC is a private person or a private institution, not entitled to award credits/ certificate, it shall identify a public Institution authorized to offer credits/ certificate for the course and issue certificate, as Co-applicant. An MoU between the two defining their roles will be formulated and later approved by the NC / SB.
- h) The NC shall constitute the following Committees immediately:
 - i. **Academic Advisory Council** (AAC) consisting of academicians for assisting the NC to consider and take decisions on every MOOC proposal.
 - ii. **Subject Matter Expert Groups** (SMEGs) for each subject consisting of academicians for evaluating the Proposals for Online Courses and make recommendations for its acceptance, improvement or rejection.
- i) The courses, which carry credits/ certification, shall be cleared by the 'host' University/Institute, who shall also agree to conduct End Examination, assessment and grant credits/ certification.



6.2. Pre-production activities (12 weeks/Online Course)

- a) Each CC shall constitute an <u>academic team</u> of educationists with proven abilities for preparation of the Teaching Learning Material (along with the pedagogy and the activity-based interventions for improving the delivery of the content).
- b) The CC shall, within 2 weeks from the date of appointment, prepare a
- c) **Proposal for MOOC** consisting of the following and submit the same to the NC for approval:
 - i. Introductory module: Defining the Course design, qualifications for taking the course, introductory video, assessment system, credits to be awarded, starting date/ending date, and expected outcomes.
 - ii. Scheduling of course: lectures / reading material / assignments / quizzes/ test into weeks and short modules.
 - iii. Instructional videos to be prepared along with the transcript, multimedia techniques to be used, and the name of the teacher-on-thecamera.
 - iv. Details of reading material such as lecture notes / additional readings to be provided.
 - v. Self-assessment modules: The total number of quizzes and assignments to be provided for the course.
 - vi. Assessment system: Weekly /biweekly assessments and assignments that would be required to be taken by the students.
 - vii. Reading material: Notes/extra readings.
 - viii. Self-assessment modules: Quizzes and tests.
 - ix. Assessment system: Weekly assessments and assignments.
 - x. Discussion forum: List of Teaching Assistants for handling the discussion forum and answering queries raised by registered Students.
 - xi. The CC shall ensure that the Online Course, (where **Credits/Certificate** on the Course are to be offered) under SWAYAM, (i) is Cleared by a University/ Institute and (ii) the University/ Institute agrees to issue certificate(s) and **'Transfer the Credits'** to Registered Students under SWAYAM that are existing regular & enrolled students from recognized as University/Institute across the country and shall follow, the UGC & AICTE (Credit Framework for Online Learning Courses through SWAYAM) Regulation, 2016, a 'Gazette Notification' issued on 19th July 2016 & 17th August 2016, respectively.
 - Non-submission of the proposal in the above manner within the given period shall automatically result in cancellation of the order entrusting the work.
- d) On receipt of the Proposal for MOOC, the NC shall place the same before the **Subject Matter Expert Groups (SMEGs)** for its consideration. The SMEGs shall convey its approval, amendment or rejection within Three weeks. In case the Subject Matter Expert Groups (SMEGs) makes suggestions for improvement/changes, the CC shall make the changes and present the same within 2 weeks further. The Subject Matter Expert Groups (SMEGs), may thereupon, make the final recommendation to the Academic Advisory Council (AAB).
- e) Based on the feedback given by the Subject Matter Expert Groups (SMEGs), the Academic Advisory Council (AAB) shall examine each



proposal and either approve, suggest changes or reject same <u>within a further period of 2 weeks</u> from the date of receipt of Subject Matter Expert Groups (SMEGs) report. The AAB shall also recommend to the NC the required budget for preparing the MOOC.

f) The NC shall thereupon, and without any further delay, communicate the decision to the CC and also release the funds required for starting the production.

6.3. Production activities (8 weeks/ Online Course)

On receipt of the approval from the NC, the CC shall proceed for production of the videos in the following manner:

- a) Identification of the studio: In order to have uniformity in Technical quality of contents developed under SWAYAM & have compatibility between contents developed by NMCs, it is recommended to have uniform set of equipment being used by CCs. The studio hired by CC shall have all equipment as listed in Annexure-I. In case a studio of these specifications is available in the institution, the same shall be used. Otherwise, a studio with these facilities can be hired for the purpose of making these Programmes as per the rates given in Para 9 A).
- b) **Production team**: There shall be a Production team experienced in preparing Programmes for educational purposes, consisting of a Director/Producer, Instructional Designer, Production Assistant, Camera persons, multi-media technicians and Editors, who can be paid by the Course Coordinator as per the rates given in **Para 9 A).**
- c) **Duration of content**: A four-credit course may have overall duration of about 20 hours of video lectures and reading Module (a course may have upto 40 Modules). Content is required to be submitted in a hard disk, the (i) 'Video Edit files' @ 10 Mbps for transmission on SWAYAM PRABHA and (ii) further compressed files @ 2.5 Mbps along with other TLM (in SWAYAM Template) for delivery through SWAYAM.

d) Presentation techniques:

- The production of programme may be done in a manner that a substantial part that at least 75% of the total duration of each production should use innovative learning techniques viz. case-studies, scenarios, animation, analogies, individual or group activities, concept-mapping, in-text learning quizzes, interactive exercises within learning modules, discussion forum, multi-media techniques, innovative graphics, live experiments, demonstrations, role-plays, field documentaries etc.
- It shall be the responsibility of the CC to ensure that none of the graphics, animations, images, sound clips, video clips used are plagiarized or cited without formal permissions from owners who must be informed of the distribution policies of SWAYAM.
- It shall be the responsibility of the CC to ensure that none of the graphics, animations, images, sound clips, video clips used are plagiarized.
- Whereas direct lecture focused on the teacher can be used, it may be kept for less than 15% of the total duration of video. Even in this case, the teacher should speak extempore and should not read from written material or even a Teleprompter. It should be ensured that the teacher before the camera is presentable as per television practices.



e) **Transcription of Video** shall be prepared along with the programme, which may be needed for translation of the transcript and for sub-titling in other languages.

6.4. Post production activities (4 weeks/Online Course)

There shall be a post-production team consisting of the Video Editor, Sound Editor and Music team, equipped with video editing software working in Non-Linear Editing System (NLE) along with suitable equipment listed in **Annexure-I.** They shall be responsible for:

- Video editing the programme using HD parameters.
- Writing, (re)recording, and editing the soundtrack if needed.
- Adding visual special effects, multimedia effects and computer-generated imagery (CGI)
- Sound re-recording or mixing with professional audio equipment.

6.5. Review of the Course content and approvals (4 weeks/Online Course)

- a) On completion of the programmes, the CC shall intimate the NC about the readiness for review of the Course.
- b) Immediately thereupon, the NC shall get the course Previewed/reviewed from academic and technical experts and thereafter convene the SMEGs meeting for viewing the course in detail along with the video and reading resources.
- c) The SMEGs, after viewing the course shall verifying the following and based on these recommendations, the NC will place the course before the AAB, which will approve the Course for uploading on the SWAYAM portal:
 - Final typos and grammar checks.
 - Brand language/message (i.e. in keeping with Online Course guidelines)
 - Pedagogy and learning experience.
 - Formatting of text and images.
 - Ensuring the presence of basic Online Course elements like video/e-Content, discussion forums, Interactive elements, assignments, assessment methodology etc.
 - Video quality checks.
- d) The NC in consultation with the CC, will also recommend the 'Start date' and the 'End date' for the course.
- e) Based on these recommendations, the NC will place the course before the AAB, which will approve the Course for uploading on the SWAYAM portal.

7. Notification of Course to all Universities

As soon as AAB approves a course, the same will be reported to the SWAYAM Board by the NC. The SWAYAM Secretariat shall request the concerned regulator to communicate to all Universities/Institutes under their jurisdiction to notify the courses to their departments and affiliating institutions for availing and transfer of credits by students enrolled with them.

8. ASSESSMENT AND CERTIFICATION

a) The CC shall decide the suitable assessment system for the course based on the stated learning outcomes, in consultation with the host University/



institution offering the course.

- b) Normally, the assessment shall have both formative assessment to promote deeper learning, critical thinking and reflection, in combination with summative assessments designed to gauge student achievement and/or performance. Summative assessments may include graded quizzes, reports or projects, peer assessments or proctored examination. Whereas an online examination would be the preferred mode, the CC may decide on the mode of conducting the final examination. Efforts must be made to include industry or industry bodies as partners in the certification process for further value addition to the students. Wherever possible, education and R & D team members from the industry need to be included in the design of course contents and problem sets. However, problems may be of a generic nature and specific practices of participating industries should not be used as contents.
- c) In case, a pen and paper final examination is to be conducted, the same shall be offered through any college/school volunteering to conduct the same. The decision in this respect will be taken by the host institution.
- d) After conduct of the examination and completion of the evaluation, the host institution shall award marks/grade as per the evaluation scheme announced, within 4 weeks from the date of completion of the final examination.
- e) On successful completion of each course, the host institution offering the Online Course would issue the certificate, along with the number of credits and grades, through which the student can get credits transferred into his/her marks certificate issued by his/ her parent institution.

9. INTELLECTUAL PROPERTY RIGHTS / COPYRIGHTHANDLING

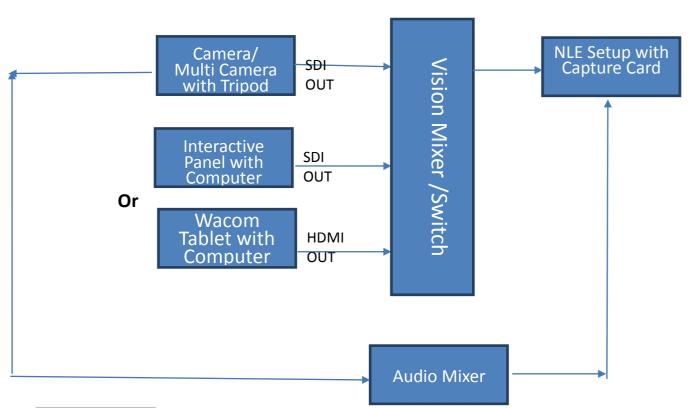
- a) The CC shall follow copyright laws for any readings, images, and video clips used as core and supplementary reading in case of licensed material if used and submit an undertaking to that effect to the NC.
- b) All contents (text, audio, video, animation, quiz etc.) developed with the funding of NMEICT will be the property of SWAYAM.
- c) All courses and contents posted in SWAYAM will be copyrighted to SWAYAM. Ministry will, from time-to-time, announce policies for access and charges, if any (for certification) and will also publish appropriate Open Educational Resources policy in consultation with other national and international bodies.
- d) The CC shall be given explicit permission for creating books and other distribution materials ever for commercial purposes with the explicit undertaking that contents published in SWAYAM shall remain there.
- e) The terms of service should be clearly laid out so as to address the following key points by the CC:
 - Any disclaimers should be clearly spelt out.
 - User /student/ institutions should be informed about the usage rights of the course content available on SWAYAM.



Annexure-I Equipment Setup & Specifications, for use in development of Online Course.

Note: Make/Models/trade names appearing in Annexure-I are indicative only, equipment with similar or better features & Specification are acceptable.

Block Diagram



1. Camera(s):

Three 1/3" type; Full HD CMOS sensors; PAL color; 1920x1080/50i; Gross Pixels ≥ 2.2 Million; camera to have a resolution of ≥ 850 TVL; Sensitivity: ≥ F10; S/N 54 db; Motorized Zoom Lens>20X (28 mm to 560mm) with optical image stabilization; Proxy Video; Aspect Ratio 16:9; Audio: AAC 2ch, 16bit, 48kHz; Multi-Camera Synchronizing with Genlock IN and TC IN/OUT; HD Recording ≥ 50 Mbps, should also support Intra / LONG GOP recording. Two or more Memory Card/Media Slots, Hot Swap for Continuous Recoding, with content security features. To support AVC H.264/MPEG4, MOV Files / Quick Time; Video out: SDI & HDMI.

Camera to have a suitable **Tripod,** with minimum payload (> the weight of Camera setup). Tripod should have floor spreader.



2. Non-linear editing:

Specifications: Non-Linear Editing Unit.

- **a). Editing Software:** Adobe Creative Cloud for Teams
- c). Hardware:
 - · Windows 10 Professional 64bit OS
 - 1TB 7200 RPM SATA 1st Hard Drive
 - 500GB 7200 RPM SATA 2nd Hard Drive
 - USB Keyboard
 - USB Optical Mouse
 - SuperMulti DVDRW SATA 1st
 - NVIDIA Quadro GPU (K4000 or better)
 - Dual Xenon Processor Air Cooling Kit (E5-2620 v2 2.10Ghz 15MB 1600 6C 1st CPU)
 - · 32GB DDR3-1866 (8x4GB) 2CPU Unbuffered RAM
 - 21" Monitor (1920 X 1080).
- **d). Video Capture Card** compatible to the NLE software similar to Black Magic Design/ HD Extreme / AJA / MATROX / DVS.

Native editing for DV, DVCAM, DVCPRO, DVCPRO 50, DVCPRO HD, AVC-INTRA, Long GOP, XAVC, FireWire device control, Still images: PSD, BMP, JPEG, PICT, PNG, SGI, TARGA, TIFF. Support for AIFF, WAV, MP3, CAF, BWF, SDII, NeXT, QuickTime.

- **e). Effects:** FxPlug support, Real-time software-based audio normalization, RT Extreme for scalable software-based, multi stream real-time effects in DV, SD, and HD formats, Real-time effects playback on main display and on NTSC/PAL or HD monitora with perfect synchronization, Dynamic RT for automatically adjusting playback quality and/or frame rate based on hardware capabilities Key frame graphs and editing in Viewer or Timeline, More than 200 transitions, effects, and filters, Import multilayered Photoshop files with layers and alpha support
- **f).** Character Generator Software with latest Patches to support English/ Hindi –Devnagri, technical & scientific fonts, symbols etc.
- 3. Card Reader: compatible to the Memory Card of Camera's:
- 4. (a) Interactive 27" Multi Touch Display & Pen:

Resolution >5000 lpi; Having >2000 pressure levels, widescreen 16:9 display; resolution of 2560 x 1440; Using Adobe RGB; 1.07 billion colors; Works with Photoshop® and Adobe® Illustrator CC; USB-3 & HDMI connectivity to PC & Mac; with features to Brush, Draw, Paint, Image editing, 3D Animation, scroll, zoom and rotate.

OR

4. (b) Interactive touch screen panel with required computer, pen and software.

Interactive touch screen panel & appropriate adjustable Moun	with required computer, pen and software t with total upto 6' Height.
LCD Panel:	≥ 50 inch widescreen.



Max resolution:	1920 x 1080
Brightness:	300 cd/m ² or more
Contrast ratio:	3,000:1 or better
Response time:	6 ms or better
Driver:	OS: Windows / Linux/ MAC
Touch pen or Finger Interactivity:	Yes
Video input:	Compatible with the computer
Video outputs:	Compatible with the computer & Vision
	Switcher

Note:

- a. The interactive panel system should be provided with: a computer having at least one HDMI output port, two USB ports and a trolley stand.
- **b.** PC should have a single processor Intel Core i7 4930K 3.4 GHz or higher and the VGA card should be GTX 780 or higher. Equivalent AMD VGA card may also be provided with MS Office suite latest version installed.
- c. Any digital peripheral / glues / distribution amplifier required with the system should be quoted as per the offered workflow design.

5. Laptop Touch Screen ≥15"

- Processor: Intel® Core™ i5 processor or better, 2.40 GHz or more.
- Operating system: Windows 10, 64bit.
- Display: 14.0" or 15.0"
- Memory: 8GB (4GB x2) DDR3 1600Mhz or more.
- Hard drive: 500GB 5400RPM for laptop, SATA hard drive.
- Open Office suite latest version.
- Optical drive.
- Wi-Fi, LAN, Bluetooth.
- HDMI true HD support Out Put.
- Built-in speakers for laptop.
- Ports: network connector RJ45, HDMI, USB 3.0, headphone jack, microphone jack, SD card reader.
- Battery capacity 4 hours or more continuous use.
- Ampli-speakers for the PCs.

6. Vision Mixer/Switcher

For connecting Cameras, Interactive Panel and Tablet: 4-CH HD Video Switcher with Inbuilt Frame Synchronizer on all inputs, Frame Storage capabilities, supporting 2-CH HD-SDI, 2-CH HDMI inputs, 2-CH HD-SDI & 1-CH HDMI outputs, 1 x Chroma-Keyer, 1x DSK.

7. Audio mixer:

Input channels: 8 Channels with minimum 6 Mic/Line selectable inputs.

I/O interface: XLR / Phono, (balanced/un-balanced).



Input sensitivity: Mic -60 db or better, Line 0 db

Audio frequency response: ≤ 20 Hz - ≥ 20 KHz ± 0.5 db

Total harmonic distortion & noise: ≤ 0.01 % -30dbBu input routed to Mix, Mic gain

30dB

S/N ratio: Better than 100 dB EQ bands: 2 (HF, MF & LF)
Variable send (aux) buses: Minimum 2

Returns: Minimum 2

Other features:

• True, professional +48V phantom power (min 2 I/P) for condenser microphones.

• Linear / Slider fader.

• RCA / Phono playback inputs and record outputs.

• Peak LEDs on all input channels.

• Mute and PFL on input channels. Output metering.

8. Microphones:

UHF wireless Lavalier / collar diversity microphone with Compatible Receiver having minimum of 6 selectable channels as per Indian region

THD: \leq 1 % Signal/Noise ratio: \geq 100 dB Rf output: \geq 25 mW

Battery life (operating time): Min. 8 hours (2AA Batteries)

Polar pattern: Supercardiod / Hypercardiod / Cardiod

Mic type: Electret /Condenser / permanent Polarised

Frequency range: ≤ 40 Hz to ≥ 20 kHz ± 3db, Receiver Output: XLR (Balanced) Line output

Accessories: Wind shield, Mic Clip & other standard accessories

9. Active speaker (2 way)

Type: Active Low/mid driver dimensions: 5" or more

Tweeter dimensions (mm): 20 mm to 40 mm

RMS: (Both LF + HF): \geq 50 watts

Frequency response: \leq 45 Hz - \geq 20000 Hz

Max. SPL: ≥ 100 dB

Protection circuits: Overload

Controls: Treble, volume, mains switch (on/off) Line inputs: Minimum 1

Line inputs connectors: XLR & 6.3 mm Jack

Input Sensitivity: Selectable -10 dB/+4 dB Operating voltage: 230 V A C \pm 10%, 50 Hz



10. Studio Cool Lights:

STUDIO LED Lights- for Day Lights:

- a) LED \geq 50 W with diffuser & Barn-doors.
 - 1. Colour temperature: about 5600K & 3200K
 - 2. Control: Manual.
 - 3. Ceiling Mount.
 - 4. On board system to control intensity from 0-100%
 - 6. 4 leaf barn door, diffusers, C clamp, safety bond
- b) LED Diffused Panel lights, ≥ 50 W -
 - 1. Colour temperature: about 5600K
 - 2. Control: Manual
 - 3. Ceiling Mount.
 - 4. 4 leaf barn-door, diffusers, C clamp, safety bond.

11. UPS:

Approved Brands Company ISO 9001 with minimum 30 minutes backup. Sealed maintenance free VRLA Battery. If more wattage UPS is required, bidder should justify the same by submitting the Power Load requirement of the equipment. Some of the features required in UPS are:

- Single Phase IN and Single Phase OUT
- Wattage: ≥ 10 KVA
- Type: (On-line) IGBT
- Input power factor: ≥ 0.98
- Output power factor: 0.8 or better
- Input power supply: 160 V 270 V 50HzAC.
- Output 230 V ±1%, 50 Hz AC.
- Isolated I/p o/p. Battery Bank with Frame/Rack

B) Post Production processes & Standards.

- Video recording format: Full HD 1920x1080 pixels.
- Videos aspect ratio: 16:9 (widescreen).
- Module Delivery: 1080i following MPEG-4 AVC Compression.
- Audio Channel 1 to have Mixed Audio Track.
- Font size: Heading: 24-30; Sub-heading: 22-26; Body: 20-24;
- Full screen Video Frame.
- All graphs and diagrams must have clear font.
- The expert/teacher should speak extempore as delivery made in case of classroom set-up and avoid reading from written material or a Teleprompter.
- Video frame to maintain 6-8% headroom;
- Video quality and Audio levels should be constantly monitored while recording.

Voice modulation be taken care of. Video clips or audio clips from eminent experts, outdoor shooting, lab based demo etc. can be used appropriately.

* * * * * *



असाधारण

EXTRAORDINARY

भाग III—खण्ड 4 PART III—Section 4

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विश्वविद्यालय अनुदान आयोग

विश्वविद्यालय अनुदान आयोग ('स्वयं' के माध्यम से ऑनलाइन ज्ञान-अर्जन पाठ्यक्रमों हेतु क्रेडिट ढ़ाँचा) विनियम,

2016

नई दिल्ली, 19 जुलाई, 2016

मि0 सं0 1-100/2016/मूक्स(ई-काँटेंट) 1. प्रस्तावना.-

- 1.1 जबकि शिक्षा के प्रसार हेतु उच्चतर शिक्षा तक पहुंच को व्यापक बनाया जाना तथा प्राद्यौगिकी में हुई प्रगति का उपयोग कर तत्संबंधी लागत को कम करना है,
- 1.2 जबिक पारम्परिक एवं ऑनलाइन शिक्षा सिहत, शिक्षा प्रदान करने के लिए वृहद् मुक्त ऑनलाइन पाठ्यक्रम (एमओओसी) एक व्यावहारिक मॉडल के रूप में उभरे हैं,
- 1.3 जबिक ऑनलाइन ज्ञान—अर्जन के भारतीय स्वरूप "स्वयं" (युवा एवं उच्चाकांशी बौद्धिकों के लिए सिक्रय ज्ञान—अर्जन की अध्ययन पद्धति) को ज्ञान—अर्जन के स्वदेशी प्लेटफॉर्म पर आरंभ किया जा रहा है।
- 1.4 जबिक ई—ज्ञान अर्जन की कहीं—भी, कभी—भी पद्धित तथा पारंपिरक और कक्षागत चॉक—एंड—टॉक अध्यापन पद्धित के बीच तालमेल बिटाने की आवश्यकता है तािक एक अनुपम विषयवस्तु अंतरण प्रणाली को विकसित किया जा सके जो शिक्षार्थियों की आवश्यकताओं की पूर्ति कर सके तथा भौगोलिक सीमाओं से इतर ज्ञान का निर्बाध अंतरण सुनिश्चित कर सके।
- 1.5 जबिक एक ऐसी विनियामक प्रणाली स्थापित किए जाने की आवश्यकता है, जिससे ऑनलाइन ज्ञान—अर्जन तथा सामान्य कक्षागत ज्ञान—अर्जन के बीच निर्बाध संबंध स्थापित किया जा सके।

अतः अब;

विश्वविद्यालय अनुदान आयोग, विश्वविद्यालय अनुदान आयोग अधिनियम, 1956 (1956 का तीसरा) की धारा 26 की उप—धारा(1) के खण्ड (च) और (छ) के अन्तर्गत प्रदत्त शक्तियों का प्रयोग करते हुए निम्नवत विनियम बनाता है, नामतः

2. लघु शीर्ष, अनुप्रयोग एवं प्रवर्तनः

- 2.1 इन विनियमों को विश्वविद्यालय अनुदान आयोग ('स्वयं' के माध्यम से ऑनलाइन ज्ञान—अर्जन पाठ्यक्रमों हेतु क्रेडिट ढाँचा) विनियम, 2016 कहा जाएगा।
- 2.2 यह विनियम किसी केन्द्रीय अधिनियम, प्रान्तीय अधिनियम, अथवा किसी राज्य / संघशासित प्रदेश अधिनियम के अन्तर्गत स्थापित और निगमित सभी विश्वविद्यालयों तथा ऐसे विश्वविद्यालयों से मान्यताप्राप्त सभी संस्थानों तथा विश्वविद्यालय अनुदान आयोग अधिनियम, 1956 की धारा 3 के तहत ऐसे सभी समविश्वविद्यालय संस्थानों पर लागू होंगे।
- 2.3 यह विनियम ऐसे छात्रों के क्रेडिट अंतरण पर भी लागू होंगे जिन्होंने देश में किसी भी शैक्षिक संस्थान में एक नियमित / अंशकालिक छात्र के रूप नामांकन प्राप्त किया है।
- 2.4 यह विनियम शासकीय राजपत्र में प्रकाशन की तिथि से लागू होंगे।

3642 GI/2016 (1)

3 परिभाषाए

- 3.1 'शैक्षिक परिषद्' एक निकाय होता है जिसे 'स्वयं' के माध्यम से अनुमेय ऑनलाइन ज्ञान—अर्जन पाठ्यक्रमों के संबंध में निर्णय लेने सहित किसी संस्थान में सभी शैक्षिक मामलों के संबंध में भी निर्णय लेने हेतु शक्ति प्राप्त होती है।
- 3.2 'पाठ्यक्रम' का अभिप्राय एक पत्र से होगा जिसे विषय के भाग के रूप में कम से कम एक सेमेस्टर तक पढ़ाया जाएगा।
- 3.3 'चतुर्ष्पदीय पद्धति': चतुर्ष्पदीय पद्धति का अभिप्राय एक ई-ज्ञान अर्जन प्रणाली से है, जिसके निम्नवत घटक हों:
 - प्रथम पद एक ई—अनुशिक्षण हैः जिसमें एक सुव्यवस्थित रूप में दृश्य—श्रव्य विषयवस्तु, एनीमेशन फिल्में, स्म्युलेशन, वर्चुअल लैब अंतर्विष्ट हैं।
 - द्वितीय पद एक ई–विषयवस्तु हैः जिसमें जहां–कहीं भी आवश्यक हों, पीडीएफ, ई–पुस्तकें, दृष्टांत, वीडियो प्रदर्शन, दस्तावेज और इंटरेक्टिव स्म्युलेशन अंतर्विष्ट हैं।
 - तृतीय पद एक वेब—संसाधन है: जिसमें विषय से संबंधित लिंक, इंटरनेट पर मुक्त वस्तुविषय, मामला अध्ययन, उपाख्यान संबंधी जानकारी, विषयों तथा लेखों का क्रमिक विकास अंतर्विष्ट हैं।
 - चतुर्थ पद एक स्व–मूल्यांकन पद्धति है: जिसमें बहु विकल्प प्रश्न (एमसीक्यू), समस्या, प्रश्नोत्तरी, निर्दिष्ट कार्य एवं उनके हल, चर्चा हेतु मंच के विषय तथा बार–बार पूछे जाने वाले प्रश्न (एफएक्यू), सामान्य भ्रान्तियों के संबंध में स्पष्टीकरण अंतर्विष्ट हैं।
 - 3.4 'मेजबान संस्थान' का अभिप्राय उस संस्थान से है जिससे पाठ्यक्रम की पेशकश करने वाला मुख्य अन्वेषक (पीआई) / विषय विशेषज्ञ (एसएमई) संबंद्ध है तथा जिसे विनियामक प्राधिकरण द्वारा विधिवत् रूप से मान्यता प्रदान की गई है / अनुमोदित किया गया है।
 - 3.5 'संस्थान' का अभिप्राय देश में पंजीकृत तथा कार्य प्रचालन करने वाले किसी शिक्षा संस्थान से है।
 - 3.6 'वृहद् मुक्त ऑनलाइन पाठ्यक्रम' (एमओओसी) ऐसे <u>ऑनलाइन पाठ्यक्रम</u> हैं जो यहां उल्लिखित चतुर्ष्पदीय शिक्षणशास्त्रीय पद्धति के अनुरूप विकसित किये गये हैं तथा भारत सरकार के 'स्वयं' प्लेटफॉर्म पर उपलब्ध कराये गए हैं।
 - 3.7 'वृहद् मुक्त ऑनलाइन पाठ्यक्रम' (एमओओसी) संबंधी दिशानिर्देशों' का अभिप्राय ऑनलाइन—ज्ञानअर्जन के विषय पर मानव संसाधन विकास मंत्रालय द्वारा जारी किए गए दिनांक 11 मार्च, 2016 के दिशानिर्देशों तथा मानव संसाधन विकास मंत्रालय द्वारा जारी किये गये तत्संबंधी उत्तरवर्ती अनुबंधों से है।
 - 3.8 'राष्ट्रीय वृहद् मुक्त ऑनलाइन पाठ्यक्रम समन्वयकर्ता' (एनएमसी) भारत सरकार द्वारा इस प्रयोजनार्थ विनिर्दिष्ट ऐसी एक राष्ट्रीय स्तरीय एजेन्सी है जिसका उद्देश्य ऑनलाइन पाठ्यक्रमों को तैयार करने संबंधी कार्य का समन्वय करना तथा ज्ञान अर्जन के एक विनिर्दिष्ट क्षेत्र में उनकी गुणवत्ता की निगरानी करना है।
 - 3.9 'मूल संस्थान' का अभिप्राय उस संस्थान / विश्वविद्यालय / महाविद्यालय से है जहां पर छात्र एक नियमित / अंशकालिक छात्र के रूप में नामांकित है।
 - 3.10 'प्रधान अन्वेषक' (पीआई): प्रधान अन्वेषक किसी प्रतिष्ठित शैक्षिक संस्थान से एक विषयवस्तु विशेषज्ञ (एसएमई) होगा जिसे एनएमसी द्वारा दिए गए किसी विशिष्ट क्षेत्र में वृहद् मुक्त ऑनलाइन पाठ्यक्रम' (एमओओसी) विकसित करने तथा पूर्ण करने का कार्य सौंपा गया हो।
 - 3.11 'क्षेत्र' का अभिप्राय ज्ञान अर्जन के एक विशिष्ट स्तर जैसे कि माध्यमिक विद्यालय, अभियांत्रिकी / अभियांत्रिकी से इतर डिप्लोमा / उपाधि / स्नातकोत्तर स्तर से हैं।
 - 3.12 'विषय' का अभिप्राय शिक्षा संस्थान में पढ़ाई जा रही एक ऐसी विधा से है (जैसे—गणित) जिसमें विशिष्ट पाठ्यक्रम मौजूद हैं तथा जिनमें परिणामतः प्रमाणपत्र/डिप्लोमा/उपाधि प्रदान की जाती है।
 - 3.13 'स्वयं—मंच' मानव संसाधन विकास मंत्रालय, भारत सरकार द्वारा विकसित किया गया तथा चलाया जा रहा एक ऐसा सूचना प्रौद्योगिकी प्लेटफॉर्म है जिसका उद्देश्य वृहद् मुक्त ऑनलाइन पाठ्यक्रम (एमओओसी) पद्धति पर ऑनलाइन ज्ञान—अर्जन पाठ्यक्रमों की पेशकश करना है।

4. ऑनलाइन ज्ञान अर्जन पाठ्यक्रमः

- 4.1 मेजबान संस्थान के माध्यम से राष्ट्रीय वृहद् मुक्त ऑनलाइन पाठ्यक्रम समन्वयकर्ता द्वारा अंतिम रूप से तैयार की गई अनुसूची के अनुरूप चिह्नित पीआई द्वारा 'स्वयं' के प्लेटफॉर्म पर ऑनलाइन ज्ञान—अर्जन पाठ्यक्रम उपलब्ध कराए जाएंगे।
- 4.2 'स्वयं' प्रतिवर्ष <u>01 जून</u> तथा <u>01नवम्बर</u> को, संस्थानों के सभी कुल सचिवों को आगामी सेमेस्टर में पेशकश किए जा रहे पर ऑनलाइन ज्ञान–अर्जन पाठ्यक्रमों के संबंध में जानकारी मुहैया कराएगा।
- 4.3 सभी संस्थान 'स्वयं' द्वारा अधिसूचना जारी किए जाने की तिथि से चार सप्ताह के भीतर सक्षम प्राधिकारी के माध्यम से 'स्वयं' के प्लेटफॉर्म द्वारा पेशकश किए जा रहे ऑनलाइन पाठ्यक्रमों पर विचार करेगी तथा अपनी शिक्षा संबंधी अपेक्षाओं को ध्यान में रखते हुए उन पाठ्यक्रमों के संबंध में निर्णय लेगा जिन्हें वह क्रेडिट अंतरण की अनुमित प्रदान करेगा।

बशर्ते कोई भी संस्थान किसी एक सेमेस्टर में किसी विशिष्ट कार्यक्रम में पेशकश किए जा रहे कुल पाठ्यक्रमों के 20 प्रतिशत पाठ्यक्रमों को ही 'स्वयं' प्लेटफॉर्म पर आनॅलाइन ज्ञान अर्जन पाठ्यक्रमों के माध्यम से पेशकश करने की स्वीकृति प्रदान कर सकता है।

4.4 यह निर्णय लेते हुए, विद्या परिषद, अन्य बातों के साथ-साथ स्वयं के ऑनलाइन पाठ्यक्रमों को स्वीकृति प्रदान करने पर विचार कर सकती है, यदिः

- क) संस्थान में किसी पाठ्यक्रम को चलाने के लिए उपयुक्त शिक्षण कर्मचारिवृंदों की अनुपलब्धता हो अथवा
- ख) छात्रों के इच्छित वैकल्पिक पत्र (पाठ्यक्रमों) की पेशकश करने के लिए सुविधाएं संस्थान में उपलब्ध नहीं हों परंतु वे 'स्वयं' के मंच पर उपलब्ध हों।
- ग) 'स्वयं' के माध्यम द्वारा पेशकश किए गए पाठ्यक्रम, संस्थान की शिक्षण-ज्ञान अर्जन प्रक्रिया को लाभ पहुंचायेंगे।
- 4.5 संस्थान की कक्षा में प्रत्येक ऐसा छात्र जिसने किसी विशिष्ट पत्र (पाठ्यक्रम) का चुनाव किया हो उसे उस पाठ्यक्रम / पत्र हेतु वृहद् मुक्त ऑनलाइन पाठ्यक्रम (एमओओसी) के लिए पंजीकरण कराना अपेक्षित होगा।
- 4.6 'स्वयं' के माध्यम से पेशकश किए जा रहे ऑनलाइन ज्ञान—अर्जन पाठ्यक्रमों को स्वीकृति देते हुए यह सुनिश्चित किया जाएगा कि पाठ्यक्रमों को चालू रखने के लिए मूल संस्थान द्वारा अनिवार्य वास्तविक सुविधाएं यथा प्रयोगशालाएं, कम्प्यूटर सुविधाएं, पुस्तकालय आदि निशुल्क तथा पर्याप्त मात्रा में उपलब्ध कराई जाएंगी।
- 4.7 मूल संस्थान द्वारा पाठ्यक्रम की संपूर्ण अवधि के दौरान छात्र को मार्गदर्शन उपलब्ध कराने तथा प्रयोगशाला / क्रियात्मक सत्रों / परीक्षा को सुविधापूर्ण ढ़ग से आयोजित करवाने के लिए एक पाठ्यक्रम समन्वयकर्ता / सुविधा प्रदाता को नियुक्त किया जाए।

वृहद् मुक्त ऑनलाइन पाठ्यक्रमों का मूल्यांकन एवं प्रमाणीकरण

- 5.1 मेजबान संस्थान और प्रधान अन्वेषक (पीआई) उनके द्वारा आरंभ किए गए वृहद् मुक्त ऑनलाइन पाठ्यक्रम (एमओओसी) हेतु पंजीकृत छात्रों के मूल्यांकन के लिए उत्तरदायी होंगे।
- 5.2 मूल्यांकन पूर्व–निर्धारित मानदंडों तथा मानकों पर आधारित होंगे तथा पाठ्यक्रम की संपूर्ण अवधि के दौरान विनिर्दिष्ट साधनों जैसे चर्चा, मंच, प्रश्नोत्तरी, निर्दिष्ट कार्य, सत्रीय परीक्षाओं और अन्तिम परीक्षाओं के माध्यम से व्यापक मूल्यांकन पर आधारित होंगे।
- 5.3 जबिक परीक्षा हेतु ऑनलाइन पद्धित को प्राथमिकता दी जानी चाहिए, तथापि, प्रधान अन्वेषक (पीआई) अन्तिम परीक्षा को संचालित करने की पद्धित पर निर्णय लेने हेतु प्राधिकृत होगा। पाठ्यक्रम को पेशकश किए जाने के समय पाठ्यक्रम की विवरणिका में इस संबंध में घोषणा की जाएगी।
- 5.4 यदि अन्तिम परीक्षा लिखित में संचालित की जाती है तो इसे आयोजित करने हेतु इच्छुक किसी महाविद्यालय / विद्यालय के माध्यम से आयोजित करवाया जाना चाहिए। इस संबंध में अंतिम निर्णय प्रधान अन्वेषक (पीआई) तथा मेजबान संस्थान द्वारा लिया जाएगा।
- 5.5 परीक्षा संचालित करवाने तथा मूल्यांकन पूर्ण किए जाने के पश्चात मेजबान संस्थान के माध्यम से प्रधान अन्वेषक (पीआई) घोषित की गई मूल्यांकन योजना के अनुसार अंक / ग्रेड प्रदान करेगा।
- 5.6 अन्तिम परीक्षा के समापन की तिथि से चार सप्ताह के भीतर छात्र के साथ—साथ उनके मूल संस्थान को अन्तिम अंक / ग्रेड की जानकारी भेजी जाएगी।
- 5.7 मूल संस्थान 'स्वयं' पाठ्यक्रम के प्रधान अन्वेषक (पीआई) द्वारा मेजबान संस्थान के माध्यम से छात्र द्वारा प्राप्त किए गए अंक / ग्रेड को छात्र की अंक तालिका में शामिल करेगा जिसकी विश्वविद्यालय द्वारा अंतिम रूप से उपाधि / डिप्लोमा प्रदान करने के लिए गणना की जाती है, बशर्ते कि जिन कार्यक्रमों में प्रयोगशाला / प्रयोगात्मक घटक सम्मिलित हों, तो मूल संस्थान, प्रयोगात्मक / प्रयोगशाला घटक हेतु छात्रों का मूल्यांकन करेगा और तद्नुसार इनमें प्राप्त अंकों / ग्रेडों को समग्र अंको / ग्रेड में सम्मिलित करेगा।
- 5.8 वृहद् मुक्त ऑनलाइन पाठ्यक्रम (एमओओसी) के सफलतापूर्वक पूर्ण हो जाने के संबंध में प्रमाणपत्र पर प्रधान अन्वेषक द्वारा हस्ताक्षर किए जाएंगे तथा इन्हें मेजबान संस्थान द्वारा जारी किया जाएगा और मूल संस्थान को भेजा जाएगा।

6. एमओओसी की क्रेडिट मोबिलिटी

- 6.1 'स्वयं' प्लेटफॉर्म के माध्यम से छात्रों द्वारा ऑनलाइन ज्ञान अर्जन पाठ्यक्रमों द्वारा अर्जित किए गए क्रेडिट के लिए मूल संस्थान छात्रों को समकक्ष क्रेडिट प्रदान करेगा।
- 6.2 कोई भी विश्वविद्यालय वृहद् मुक्त ऑनलाइन पाठ्यक्रमों (एमओओसी) के माध्यम से अर्जित क्रेडिट की मोबिलिटी के लिए किसी भी छात्र को इंकार नहीं करेगा।

7. <u>वृहद् मुक्त ऑनलाइन पाठ्यक्रमों (एमओओसी)के अबाधित समेकन हेतु विश्वविद्यालय के नियमों तथा विनियमों</u> में किए जाने वाले अपेक्षित संशोधन

7.1 प्रत्येक संस्थान, इन विनियमों को जारी किए जाने की तिथि से चार सप्ताह के भीतर अपने सक्षम प्राधिकारी के माध्यम से अपने अध्यादेशों, नियमों, विनियमों आदि में किए जाने वाले अपेक्षित संशोधनों के बारे में निर्णय लेगा ताकि इन विनियमों के उपबंधों को उनमें सम्मिलित किया जा सके।

8 अनंतिम उपाय

8.1 विश्वविद्यालय अनुदान आयोग तीन वर्ष के इस अवस्थान्तरणीय काल के दौरान इन विनियमों के कार्यान्वयन के समक्ष आने वाले मुद्दों का समाधान करने के लिए एक स्थायी समिति का गठन करेगा।

प्रो. जसपाल एस सन्धू, सचिव, यूजीसी [विज्ञापन—III / 4 / असा. / 182 (113)]

UNIVERSITY GRANTS COMMISSION

UGC (Credit Framework for Online Learning Courses through SWAYAM) Regulation, 2016.

New Delhi, the 19th July, 2016

No. F.1-100/2016(MOOCs/e-content) 1. Preamble.—

- 1.1 Whereas Education has to widen the access to higher education and bring down its cost by using technological advances,
- 1.2 Whereas Massive Open Online Courses (MOOCs) have emerged as a viable model for imparting education, involving conventional and online education,
- 1.3 Whereas the Indian version of online learning is being launched on an indigenous platform of learning, named as SWAYAM (Study Web of Active Learning by Young and Aspiring Minds),
- 1.4 Whereas there is a need to create synergies between the salient features of anytime-anywhere format of e-Learning and the traditional classroom-based chalk and talk method to develop a unique content delivery mechanism, which is responsive to learners' needs and ensures seamless transfer of knowledge across geographical boundaries,
- 1.5 Whereas there is a need to put in place a regulatory mechanism that would allow seamless connect between the online learning and the regular class room learning,

Now therefore;

University Grants Commission in exercise of the powers conferred by clause (f) and (g) of sub-section (1) of Section 26 of the UGC Act 1956 (No. 3 of 1956), makes the following Regulations, namely;

2. Short title, Application and Commencement:

- 2.1 These Regulations shall be called the UGC (Credit Framework for online learning courses through SWAYAM) Regulation 2016.
- 2.2 These shall apply to all universities established or incorporated by or under a Central Act, a Provincial Act, or a State/Union Territory Act and all institutions recognized by or affiliated to such Universities and all institutions deemed to be universities under Section 3 of the UGC Act, 1956.
- 2.3 These shall further apply to the transfer of credits of such students who are enrolled as regular/part-time students in any educational institution in India.
- 2.4 These shall come into force from the date of their publication in the official Gazette.

3. <u>Definitions:</u>

- 3.1 'Academic Council' is the body empowered to take decisions regarding all academic matters in an institution including the decision regarding permitting online learning courses through SWAYAM.
- 3.2 'Course' shall mean a paper which is taught for at least one semester as a part of a subject
- 3.3 'Four quadrant approach': the four Quadrant approach means e-learning system that has the following components:
 - Quadrant-I is e-Tutorial: that shall contain: Video and Audio Contentinan organised form, Animation, Simulations, Virtual Labs.
 - Quadrant-II is e-Content: that shall contain: PDF/e-Books/illustration, video demonstrations, documents and Interactive simulations wherever required.
 - Quadrant-III is Web Resources: that shall contain: Related Links, Open Content on Internet, Case Studies, An ecdotalin formation, Historical development of the subject, Articles.
 - Quadrant-IV is Self-Assessment: that shall contain: MCQ, Problems, Quizzes, Assignments and solutions, Discussion forum topics and setting up the FAQ, Clarifications on general misconceptions.
- 3.4 'Host Institution' shall mean the institution duly recognised/approved by the regulating authority, to which the PI/SME offering the course belongs.

- 3.5 'Institution' shall mean any academic institution registered and functioning in India.
- 3.6 'MOOCs': Massive Open Online Courses (MOOCs) are such <u>online courses</u> which are developed as per the pedagogy stated herein; following the four quadrant approach and made available on the SWAYAM platform of Government of India.
- 3.7 'MOOCs Guidelines' shall mean guidelines on online learning issued by the MHRD vide its orders dated 11th March 2016 and subsequent addendums issued by the MHRD.
- 3.8 'National MOOCs Coordinator' (NMC) is a Nation level agency designated as such by the Government, for the purpose of coordinating the production of the online courses and for overseeing their quality in a designated sector of learning.
- 3.9 'Parent Institution' shall mean the institution/university/college where the student is enrolled as a regular/part-time student.
- 3.10 'Principal Investigator (PI)': The PI shall be a Subject Matter Expert (SME) belonging to a reputed educational institution, identified and entrusted with the task of developing and delivering MOOCs in a given area by the NMC.
- 3.11 'Sector' shall mean a particular level of learning such as high school, engineering/non-engineering diploma/degree/post-graduation.
- 3.12 'Subject' shall mean a discipline (eg Mathematics) taught in an educational institution consisting of specific courses, resulting in awarding of a certificate/diploma/degree.
- 3.13 'SWAYAM platform' is an IT platform developed and made functional by the Ministry of Human Resource Development of Government of India for the purpose of offering online learning courses on the MOOCs pattern.

4. Online learning courses:

- 4.1. The online learning courses shall be made available on the SWAYAM Platform by the PI identified by the National MOOCs Coordinator, through the Host Institution, as per the schedule finalised by him/her.
- 4.2. The SWAYAM shall notify to the Registrars of all the Institutions, on 1st June and 1st November every year, the list of the online learning Courses going to be offered in the forthcoming Semester.
- 4.3. All the Institutions shall, within 4 weeks from the date of notification by SWAYAM, consider through their Competent Authoritythe online learning courses being offered through the SWAYAM platform; and keeping in view their academic requirements, decide upon the courses which it shall permit for credit transfer.
 - Provided that an Institution can only allow up to 20% of the total courses being offered in a particular program in a Semester through the online learning courses provided through SWAYAM platform.
- 4.4. While making this decision, the Academic Council may, *interalia*, consider allowing online courses of SWAYAM if:
 - a) There is non-availability of suitable teaching staff for running a course in the Institution or
 - b) The facilities for offering the elective papers (courses), sought for by the students are not on offer in the Institution, but are available on the SWAYAM platform.
 - c) The courses offered on SWAYAM would supplement the teaching-learning process in the Institution.
- 4.5 Every student,in the class of the institution,offering a particular paper (course) would be required to register for the MOOCs for that course/paper.
- 4.6 While allowing the online learning Courses offered by SWAYAM, it shall be ensured that the physical facilities like Laboratories, computer facilities, library etc, essential for pursuing the courses shall be made available free and in adequate measure by the parent institution.
- 4.7 The parent institution must designate a course coordinator/facilitator to guide the students throughout the course and to facilitate/conduct the Lab/Practical sessions/examinations.

5. Evaluation and Certification of MOOCs

- 5.1. The host institution and the PI shall be responsible for evaluating the students registered for the MOOCs course launched by him/her.
- 5.2. The evaluation should be based on predefined norms and parameters and shall be based on a comprehensive evaluation throughout the length and breadth of course based on specified instruments like discussions, forums, quizzes, assignments, sessional examinations and final examination.

- 5.3. Whereas an online examination would be the preferred mode, the PI shall be authorised to decide on the mode of conducting the final examination. This shall be announced in the overview of the Course at the time of offering the course.
- 5.4. In case, apen and paper final examination is to be conducted, the same shall be offered through any college/school volunteering to conduct the same. The decision in this respect will be of the PI and the host institution.
- 5.5. After conduct of the examination and completion of the evaluation, the PI through the host institution shall award marks/grade as per the evaluation scheme announced.
- 5.6. The final marks/grade shall be communicated to the students as well as the parent institution of the student, within 4 weeks from the date of completion of the final examination.
- 5.7. The parent Institution shall, incorporate the marks/grade obtained by the student, as communicated by the Host Institution through the PI of the SWAYAM course in the marks sheet of the student that counts for final award of the degree/diploma by the University with the proviso that the programs in which Lab/Practical Component is involved, the parent institution will evaluate the students for the practical/Lab component and accordingly incorporate these marks/grade in the overall marks/grade
- 5.8. A certificate regarding successful completion of the MOOCs course shall be signed by the PI and issued through the Host Institution and sent to the Parent Institution.

6. Credit Mobility of MOOCs

- 6.1. The parent Institution shall give the equivalent credit weightage to the students for the credits earned through online learning courses through SWAYAM platform in the credit plan of the program.
- 6.2. No university shall refuse any student for credit mobility for the courses earned through MOOCs.

7. Amendment required in University Rules and Regulations for Seamless Integration of MOOCs

7.1 Every Institution, shall within 4 weeks from the date of issue of these Regulations, shall decide through their Competent Authority, the amendments required in their Ordinances, Rules, Regulations etc to incorporate provisions of these Regulation.

8. Transitory Measures

8.1 The UGC shall notify a Standing committee to resolve any issues that may arise in the implementation of these regulations during the transition period of three years.

Prof. JASPAL S. SANDHU, Secy. UGC [ADVT.-III/4/Exty./182 (113)]

Annexure-I

Please choose most suitable stream for your course

- 1. Art/Culture/Literature/Language
- 2. Social Science
- 3. Management and other Professional Courses
- 4. Natural & Applied Sciences

Annexure-II

	1
1.	Agriculture
2.	Agro-Chemical and Pest Control
3.	Anthropology
4.	Applied Life Science (Sericulture)
5.	Applied Physical Science (Envir. Science)
6.	Applied Physical Sciences (Computer Science)
7.	Applied Physical Sciences (Electronics)
8.	Applied Physical Sciences (Industrial Chemistry)
9.	B. A. Education
10.	B. A. Multimedia Communication
11.	B. Arch.
12.	B. Library and Information Science
13.	B. Pharmacy
14.	B.A. LLB
15.	B.Com Commerce
16.	B.Ed (English)
17.	B.Ed.
18.	B.Ed. (Special Education for Visually
19.	B.El.Ed. (Elementary Education
20.	B.P.Ed.
21.	Bachelor of Business Studies
22.	Bachelor of Theatre Arts (core papers)
23.	BFA Painting Applied Art Sculpture
24.	Bio-Chemistry
25.	Bio-Informatics
26.	Bio-Medical Science
27.	Botany
28.	Business Economics
29.	Business Management
30.	Chemistry
31.	Communication & Journalism
32.	Computer Science
33.	Criminology
34.	Cyber Security/Information Security
35.	Economics
36.	Electronics
37.	English Language
38.	English Literature
39.	Environmental Science
40.	Film Studies
41.	Fine Arts
42.	Food Technology
43.	Foreign Language courses – German, Spanish, French & Russia (at the
	level of certificate course)
	· · · · · · · · · · · · · · · · · · ·

44.	Forensic Science
45.	
46.	Geology
	Geology Hindi Journalism
47.	
48.	Hindi Language
49.	Hindi Literature
50.	History
51.	Home Science
52.	Human Resources Management
53.	Human Rights
54.	Life Sciences
55.	Management & Marketing of Insurance
56.	Manuscriptology
57.	Marketing Management & Retail Business
58.	Mathematical Science (General Maths)
59.	Mathematics
60.	Microbiology
61.	Music (Hindustani Classical)
62.	Music (KarnatakiSangeet)
63.	Music (RavindraSangeet)
64.	Office Administration & Secretarial Practice
65.	Performing Arts
66.	Philosophy
67.	Physical Sciences
68.	Physics
69.	Political Science
70.	Polymer Science
71.	Population Studies
72.	Psychology
73.	Public Administration
74.	Sanskrit
75.	Social Welfare Administration
76.	Social Work
77.	Sociology
78.	Statistics
79.	Tourism
80.	Urdu
81.	Vocational Studies
82.	Vocational Studies - Mass Communication Video Production
83.	Vocational Studies (Advertising papers)
84.	Vocational Studies (Computer & Networking papers)
85.	Vocational Studies (Financial Accounting papers)
86.	Vocational Studies (Photography)
87.	Zoology
1	

Other than the listed above, please specify.

Annexure-III

Please Specify, the degree program to which the proposed course belongs.

- B.A. (Honors)
- B.A. (Program)
- B.SC.
- B.SC (Honors)
- BBA
- BFA
- B.Ed.
- B.P.Ed.

Other than the listed above , please specify.

ANNEXURE-IV

LIST OF MEDIA CENTRES

S. No.	Location	Name & Address	Contact Number & E-mail ID
1.	Andhra Pradesh	Shri Sumanth C. Paranji Officer-on-Special Duty (OSD), Educational Multimedia Research Centre EFLU, O.U. Campus Hyderabad- 500605 Andhra Pradesh	Ph: 040-27098314, 27098131 Ext. 494, 27098185, 27097962 27207308 (R) M: 098666 97896 F: 040-27207808, 27098141 27098402, 27098314, 27098402 director.emmrc.eflu@gmail.com emedia@emmrc-eflu.org
2.	Andhra Pradesh	Dr. K. Narender Director (I/c) Educational Multimedia Research Centre Osmania University Hyderabad – 500007 Andhra Pradesh	Ph: 040-27098659, 27682370 040-65870140 M: 09849168717, 09177414060, 09985020205 F: 040-27098769 emmrcou@yahoo.co.in vjavrc@hotmail.com
3.	Assam	Dr. Jyoti Prasad Saikia Director I/c Educational Multimedia Research Centre Dibrugarh University Dibrugarh - 786604 Assam	M: 09864231631 jpsaikia.2012@gmail.com
4.	Bihar	Prof. Israil Khan Director Educational Multimedia Research Centre Magadh University, Bodhgaya Gaya - 824234 Bihar	M: 09431416005 emmrc.mu@gmal.com

5.	Delhi	Prof. Iftekar Ahmed Director AJK Mass Communication Research Centre Jamia Millia Islamia Maulana Mohammed Ali Jauhar Marg New Delhi - 110025	Ph: 26986810, 26987285 26986812, 26986813, 26986832 Ext. 4100 M: 09911109399 F: 26986811(Dir.), 26980229 (Registrar), 26981232 (VC) dir mcrc@jmi.ernet.in mcrc@jmi.ernet.in ajkmcrc@hotmail.com
6.	Gujarat	Prof. B. V. Patel Director (I/c) Educational Multimedia Research Centre Guru Nanak Bhavan Gujarat University, Navrangpura Ahmedabad - 380009 Gujarat	Ph: 91-79-4026 2409 (Off), 4026 2402 (Dir) F: 91-79-4026 2437 M: 09537974777 emrcabadad1@bsnl.in
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		493, Ajaynagar, Kolkata - 700 094 (Adjacent to Indus Valley World School).	

ON UNIVERSITY LETTER HEAD

Consent Letter for being Host University

(University/Institution) provides consent to facilitate Delivery, Evaluation and Certification including transfer of credits for the MOOC (s) (title) ofcredits
Nos of MOOCs as detailed per the enclosed Annexure*.
This consent is being made based on the certifications made by PI
Respective Course Coordinator, who has / have developed the MOOC(s) in four quadrants as per the UGC guidelines and having met the requirement of MOOC(s) as envisaged in MHRD guidelines dated $11^{\rm th}$ March 2016 and $1^{\rm st}$ June 2017.
Signature: Date: Name & Designation
* Include the List as signed Annexure with details such as MOOCs Title, PI's Name, and MOOCs Credits etc.