

GUIDELINES FOR E-CONTENT DEVELOPMENT

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**UNIVERSITY GRANTS COMMISSION
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GUIDELINES FOR e-CONTENT DEVELOPMENT

1. INTRODUCTION:

The UGC e-Content scheme aims at developing high quality e-Content, as well as expertise for generating such content over the long term. The scheme provides financial assistance and technical support to teachers and other experts based in colleges and universities for the development of e-Content. The e-Content development and the associated web based learning described here do not seek to replace traditional teaching and learning, but are expected to supplement them. The inclusion of e-Content in learning is now inevitable, and the UGC initiative is designed to meet the new challenges, and to help India take the lead in this newly emerging field.

The e-Content, once developed, will be maintained at the mirror sites of the UGC Information Network (UGC INFONET) and will also be available at Consortium for Educational Communication (CEC) Website. The content will be accessible to all teachers and students of the Indian university system throughout the country.

The goal of this scheme is to encourage individual teachers, groups of teachers in colleges and universities and experts in the IT industry in content development and multimedia production to develop educational content in electronic format, suitable for use in various teaching and learning programmes. This scheme is opened to teachers in all subjects and disciplines.

2. OBJECTIVES:

The objectives of the scheme are to

- (a) Promote generation of e-Content in all subjects;
- (b) Develop teachers' and experts' resources in e-Content creation;
- (c) Make available the e-Content to teachers and students through various delivery modes for formal and non-formal education, for supplementing and complementing the process of teaching and learning in higher education;

- (d) Develop partnerships between educational institutions and the IT industry for the continuous development of new content and methodology taking into account contemporary technology.

3. ELIGIBILITY:

Proposals for (i) Content development and/ or (ii) Programme development of e-Content can be submitted to CEC by any of the following:

- (a) Teachers, including retired teachers linked with colleges and universities, with experience in undergraduate or post-graduate teaching.
- (b) College or university departments
- (c) A college or a university
- (d) A consortium of universities
- (e) Commercial establishments or production houses having related experience in production of e-Content, LoR's and Video.

4. IMPLEMENTING AGENCY:

Consortium for Educational Communication, an Inter University Center of the UGC, (www.cec-ugc.org) shall be the implementing and monitoring agency of the UGC e-Content scheme. The CEC shall also provide technical specifications, production format, template and other guidance for e-Content development.

5. e-CONTENT MODULE & CONTENT DURATION

Content duration has been estimated on the basis of the number of hours that are required to transact the content in the classroom. For example, a course in the classroom requires one credit and a credit is equivalent to 15 hours. The content of a course will be taken as 15 hours classroom teaching. On an average, UG students have to take 6 to 8 papers in an academic year. Therefore, during the study period of 3 years a student may take 18 - 24 papers.

Each paper requires 20 - 25 lessons. Presuming that a lesson will take three hours of teaching, 60 to 75 hours will be required to complete one paper. Two and a half hours of classroom lecture is normally covered by an e-content Module of 30

minutes duration. So, on an average, 300 Modules are required for completion of the full course.

Similarly, duration of Video programmes produced by the Programme Developer concerning each module shall be about 30 minutes.

Production of 'Learning object Repository' (LoR) related to the modules also produced by the Programme Developer and for use in PC and internet shall be of 1-2 minutes of duration.

6. MONITORING OF THE PROGRAMME

The entire process of e-Content development requires support of academicians, technologists and Media Managers. The EMMRC's (which are already engaged in the production of e-Content) and any other production agencies having similar experience shall be engaged in production of e-content.

The Director, CEC shall constitute an Academic Standing Committee, members of which, besides officers from CEC, shall also include Technical and Production Experts. The committee shall be responsible for selecting and engaging a Course Coordinator for each of the e-Course launched by the CEC. The Academic Standing Committee shall meet once in three months, or more often if needed, to screen the proposals received, engage Production Agency/Agencies for development of each e-Content course and recommend the number of modules to be assigned, financial package offered to Content and Programme development personals/agencies, whether the work assigned is for Content development or Programme development, etc. The committee shall be an apex body responsible for taking decisions concerning issues regarding e-Content development.

7. ENGAGING THE COURSE COORDINATOR

Academic Standing Committee shall engage a Course Coordinator for each of the e-Course, launched by the CEC. The responsibility of the Course Coordinator shall be:

- a) Frame a syllabus and introduce improvements in the syllabus on the subject assigned.

- b) Choose a number of subject expert(s) and assign them Modules for Content Development job on the subject assigned to him/her.
- c) Ensure Text, Lecture and complete course material is available as per CEC e-Content Template.
- d) Ensure all e-Content Modules of the whole course are produced in association with the Production Agency / Agencies that are assigned to do the work.
- e) Preview the programmes produced and certify its correctness academically.
- f) Coordinate with Programme developer and CEC, for proper e-Content generation.
- g) Ensure corrections suggested by the CEC are incorporated.

The Course Coordinator, shall be paid an honorarium of Rs. 3,00,000/- per subject for a three-year UG Course. However, if the subject Expert has not completed the work for the complete Course assigned, another Course Coordinator shall be engaged for the remaining work and both Course Coordinators shall be paid proportionate amount based upon the work allotted and the work completed by each.

There shall be two components of e-Content, (a) Content development and (b) Programme development. In case the selected person/agency intends to do a particular component, then the following procedure shall be followed:

8. CONTENT DEVELOPMENT & SUBJECT EXPERTS

The syllabus proposed for creation of e-Content shall be as per UGC Model Curricula for Undergraduate level courses. However, the Course Coordinator in consultation with the Subject Experts is expected to incorporate the latest developments that have taken place in that particular subject. The intention here is to provide scope for value added information on the subject.

The subject expert(s) shall produce full text of the academic content for each of the module comprising the following aspects and shall submit text to the Course Coordinator or the Production Agency on print form and on DVD as soft copy:

- a) Home**

- b) Objectives**
- c) Subject Mapping**
- d) Summary**
- e) Text**
 - Case studies**
 - FAQ's**
- f) Video and audio**
- g) Assignments**
 - Quiz**
 - Tutorial**
- h) References**
 - Glossary**
 - Links**
- i) Download**
- j) Blog**
- k) Contact**

The subject expert(s) shall also identify points and the Graphics, Animations & other information that are required to be included in the module. He/she/they will continue to provide academic support till the module(s) is/ are produced and approved.

The subject expert(s) may be offered to produce academic content of a number of modules of e-Content Development and for each module he/she/they shall be paid, as a package, an honorarium of Rs.12,000/- per Module for providing only academic content, or Rs.15,000/- per Module for providing academic content as well as appearing as presenter on camera.

However, if the subject expert is not acting as the presenter, the services of a presenter(s) may be availed of with a payment of Rs.3000/- per module. Payments on this shall be made by the CEC after successful completion of each module.

Besides this the Subject Expert shall have to create a bank of Questions and write its Answers in the form of LoR's. For this he/she shall be paid Rs.100/- for writing each question answer for a number of LoR's, number about ten in each of the module.

9. DELIVERABLES

It has to be ensured that the following products shall be delivered as per technical specifications and production format specified by the CEC:

1. Production of e-Content Modules suitable for use in PC and internet.
2. Production of Video Programme suitable for use in TV broadcast.
3. Production of Learning object Repository (LoR) related to the module produced and for use in PC and internet. LoR's are short answer (1-2 minutes) on video, graphics, animations and text to a number of questions arising in a module.

10. PROGRAMME DEVELOPMENT:

EMMRC will be responsible for (I) subject specific academic content development and (II) Programme development of e-Content, Video based productions and production of LoR's in 17 subjects in Phase-I (see diagram at Annexure IV). Further, the EMMRC's under Phase II shall supervise production of content specific to other 50 subjects with the help of academicians and production agencies other than the Media Centre itself (see diagram at Annexure V).

The Programme Developer, selected by CEC, may be assigned to produce one or more Modules, for one or more subject(s), and paid Rs.15,000/- per Module, for providing its technical infrastructure, provided the work completed by him/her is approved by the CEC. The Programme Developer, shall take the Academic content from the Subject Coordinator/ Subject Expert, engaged by the CEC and shall produce e-Content Module as per CEC Academic and Technical criteria and providing Graphics, Animation and Multimedia inputs, wherever needed. He/She shall also incorporate necessary modifications as communicated by the Subject Coordinator or the CEC. The Programme Developer, shall submit the integrated e-Content developed (as per Para 8 above) and other products as per CEC technical criteria on a Portable Hard Disk to CEC (Hard Disk returnable to the agency).

Payments for production of e-Content shall be made by the CEC after successful completion of each module. Looking into the vastness of the project and time

schedule, an agency proposing to produce more than ten modules will be given preference.

However, for production of Video Programmes and LoR (other than the e-Content production), the Programme Developer shall be paid Rs,10,000/- and Rs.200/- for each Video Programme and LoR produced, respectively, provided it is produced as per technical specifications and production format specified by the CEC.

In first phase it is proposed that CEC shall coordinate with the 17 EMMRC for development of one under graduate (UG) subject each and produce e-Content, Video based programmes and Learning object Repository (LoR) during the next 1 ½ to 2 years as per Annexure III. Since, the Media Centres are fully supported by the UGC by providing their establishment and development grants, the additional grant for purchase of equipments, software, engagement of manpower on contract and consumables and materials required for making e-Content would be made available to the Centres by the CEC for the items not available with the Centres.

Similarly CEC in second phase intends to produce e-Content, Video based programmes and learning object Repository for additional fifty subjects, using the services of academicians and production houses thought the country. The Phase II production may start concurrently with Phase I or six months after the start of phase I.

11. PROCEDURE FOR APPLYING FOR THE SCHEME, APPROVAL AND SANCTION OF GRANT BY THE UGC/CEC:

The UGC and the CEC shall provide wide publicity and advertise the scheme in news papers nationwide and on the CEC and the UGC websites, inviting applications for (a) creation of panel of subject experts in each subject interested in providing academic support and (b) from production houses/agencies engaged in the development of e-Content. The subject for which proposals are invited shall be published in the websites.

The eligible group is encouraged to submit a proposal (in the prescribed proforma, available at Annexure-I) at any time to the CEC, it being the implementing agency.

A teacher should submit application through the Principal of the College or the Registrar of University, in which he/she is working.

A Programme Developer, who has the requisite professional (Audio, Video, Graphic, Animation, Multimedia etc.) equipment, expertise and at least three years of experience in providing similar work, may apply to the CEC for production of e-Content Modules by giving complete details on equipment, expertise and experience in production of e-Content development,

The proposals received for e-Content development by the CEC will be evaluated by an Academic Standing Committee. The Academic Standing Committee shall meet once in three months, or more often if needed, to screen the proposals received, engage Production Agency/Agencies for production of each e-Content course and recommend the number of modules to be assigned, financial assistance, whether the work assigned is for Content development or Programme development, etc.

12. TIME FRAME FOR PRODUCTION OF COURSEWARE:

A pilot module shall be produced by the Programme Developer in two months. On approval of the pilot module by the CEC, the assigned set of 10 modules will have to be completed by an agency within one month. However, the full courseware of 1st, 2nd and 3rd year should be produced within 18 months from the date of award of the assignment.

13. PROJECT MANAGEMENT:

A Steering Committee shall be constituted by the Chairman, UGC, in consultation with the Director, CEC, comprising of a panel of subject experts, technical experts, media professionals, managers including officials from the CEC to monitor and review the progress of implementation of the e-content Scheme. The Director, CEC or his/her nominee shall be the Member Secretary of the Steering Committee.

14. QUALITY CONTROL:

The content authenticity shall be the responsibility of the Course Coordinator. However, the technical quality checking shall be the responsibility of the CEC.

Further, issues concerning copyright aspects / intellectual property rights are to be taken care of by the e-Content production agency.

The final products in the form of e-Content modules shall finally be previewed and approved before making it available to the public. However, the general quality check which includes technical quality shall be done at the CEC.

15. ICR & COPYRIGHTS

The intellectual Copy Rights (ICR) and Production Copy Rights of the e-Content and other products developed shall rest with the CEC.

16. PAYMENT SCHEDULE

Payment to Course coordinator, Subject experts, Programme developer etc., shall be made as per the scheme, by the CEC.

17. PROCEDURE FOR MONITORING THE PROGRESS OF THE SCHEME:

The proposals will be evaluated by the Academic Standing Committee, keeping in mind the following criteria:

- a. Technologically Friendly: so as to be downloaded and used on any computer either independently or in a LAN situation;
- b. Learner Friendly: for easy navigation;
- c. Learner Centric: to be useful in self-instructional mode;
- d. Teacher Friendly: so as to be used in various teaching-learning methods such as classroom lectures, tutoring to a group, lab session, etc.;
- e. Employing Learner Centric Pedagogy: specifically, the designer of the e-Content should pay attention to the teaching model used - such as simple information communication, exploratory approach, discovery approach, mastery learning etc. Many types of interactive methods should be included to make the learning process effective and efficient.
- f. Self-evaluative: so as to have plenty of evaluation material to give feedback to the learner as to his/her achievements in a given topic of the course and including formative as well as summative evaluation.

- g. Object Based Learning/Teaching: so as to state specifically the objects of learning/teaching and employ different strategies for skill, competency and functionality developments.

18. PROFORMA FOR SUBMITTING UTILIZATION CERTIFICATE AND PROGRESS REPORT:

Statement of Expenditure and Utilisation Certificate (**Annexure-II**) shall be submitted to CEC as per usual norms and procedures.

19. INCENTIVES FOR CREATION OF e-CONTENT PROGRAMME

The teachers/subject experts who put their rich experience in the development of e-Content will be given due recognition by considering their work on e-Content development as equivalent to a publication in an international peer reviewed journal/public book, subject to the condition that a notification in this regard is issued by the UGC.

20. PROFORMA FOR SUBMITTING UTILIZATION CERTIFICATE AND PROGRESS REPORT:

Statement of Expenditure and Utilisation Certificate (**Annexure-II**) shall be submitted to CEC as per the UGC norms and procedures.

PROFORMA FOR APPLYING UNDER THE SCHEME

1. Name of Teacher(s), Expert(s), Academic Institution(s), IT Industry/ Company for development of e-content;
2. Structure/details of e-content:
3. The linkages of e-Content produced with that of present UG/PG syllabi and curricula:
4. Target group for implementing the pedagogy on e-learning:
5. Methodology evolved for its continuous development and the collaborated institutions for supplementing/ complementing the e-learning process:
6. Details of e-development tools/software and the requisite infrastructure:
7. List of facilities, major equipment, make, model no., for acquisition, production, editing, animation, graphics, multimedia, etc., available at the production house/agency.
8. Name of technical & production staff members, their qualification, field of expertise, work experience particularly in the production of e-content development and number of years associated with the agency.
9. Production agency should submit copy of Income tax Returns for the past five years.
10. Details of experts for e-content development, methodology for delivery system both for teaching and research and its evaluation:
11. Budgetary estimates and time frame for completion:
12. Any other information.

Utilization Certificate

(To be sent to the CEC)

..... College/University

Certified that the Project Grant of Rs. _____ (Rupees - _____) approved by the CEC for e-Content Development Project at the College/University has been utilized as per details given below:

Amount of grant received from the CEC	:
Details of expenditure incurred	:
(a) Honorarium to the Content Developer/ Subject Expert etc.	:
(b) Secretarial Assistance	:
(c) Travel Grant	:
(d) Contingency/compilation and Communication Expenses	:
(e) Total expenditure	:
(f) Unspent balances refunded/refundable to the CEC:	:
(g) Balance grant payable by the CEC	:

Certified further that all the terms and conditions laid down in the CEC letter no. _____ dated _____ have been fulfilled by the College/ University and the grant has been utilized for the purpose for which it was sanctioned.

Certified further that the inventories of permanent and semi permanent assets created/acquired wholly or mainly out of the grants given by the CEC as indicated above are being maintained in the prescribed form and are being kept up to date and these assets have not been disposed off, encumbered or utilized for any other purpose.

1. Signature of the Awardee

2. Signature of the

Chartered Accountant

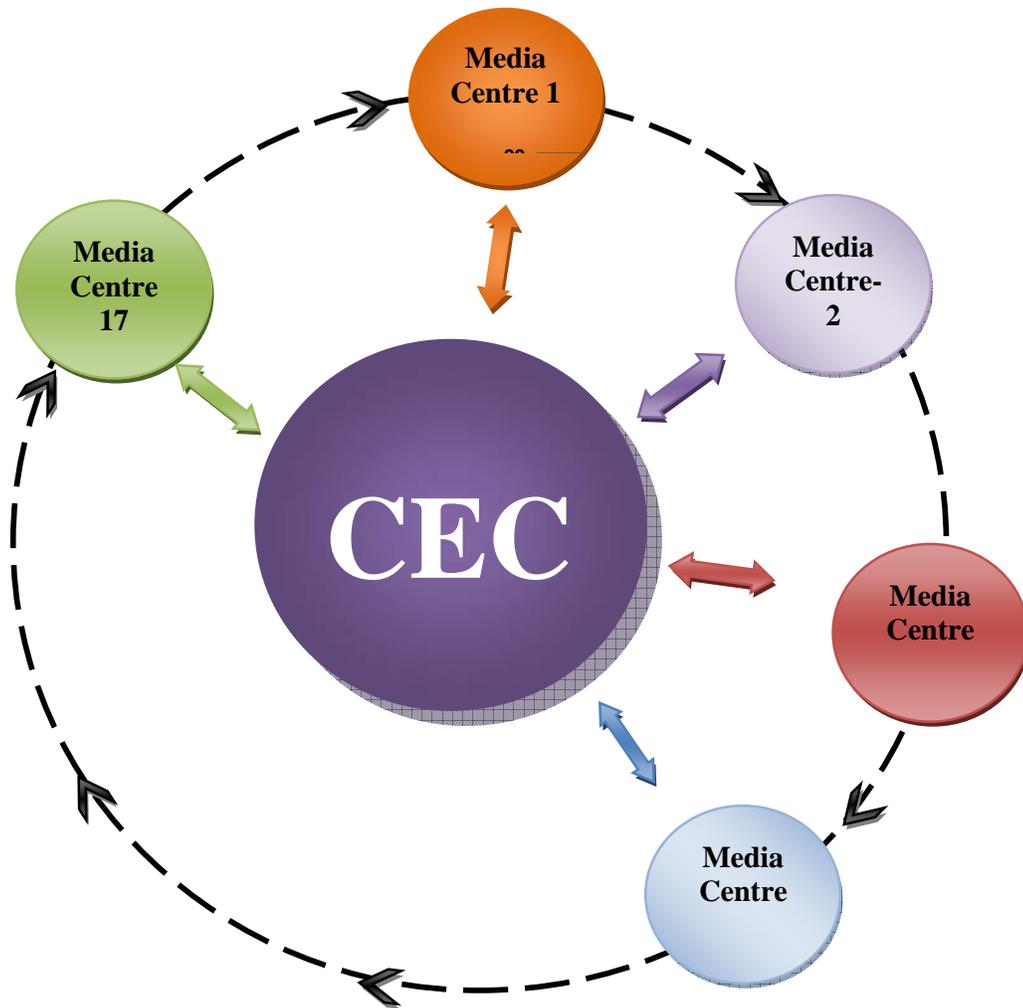
3. Signature of the nominated officer
of the University/College authorized
to operate the bank account jointly

UNDER GRADUATE SUBJECT TO BE TAKEN IN PHASE I

S. No.	Subjects	Programme to be produced by the EMMRC
1	Maths	Calicut
2	Physics	Poona
3	Chemistry	Roorkee
4	Botany	Srinagar
5	Zoology	Ahmedabad
6	Political Science	Manipur
7	History	Kolkata
8	Economics	Osmania
9	Commerce	Jodhpur
10.	Language (English)	TEFLU, Hyderabad
11	Geography	Mysore
12	Psychology	Sagar
13	Computer Science	Chennai
14	Environmental Science	Indore
15	Communication & Journalism	Jamia Millia Islamia
16	Sociology	Madurai
17	Agriculture	Patiala

MANAGEMENT DIAGRAM PHASE-I

e-Content Development, Production of Video Programmes and Learning object Repository



MANAGEMENT DIAGRAM PHASE-II

e-Content Development, Production of Video Programmes and Learning object Repository

