

Course Handbook to the NITTT Mentors



AICTE – NITTT

Mentor Orientation Training Programme (MOTP)

22 – 26 August 2022

Organized by



National Institute of Technical Teachers Training and Research

[An Autonomous Institute under Ministry of Education, Government of India]

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Course Team

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Module 4: Prof. Dr. S. S. Kedar

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AICTE - NITTT

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Mentor Orientation Training Programme

Rationale

The “Orientation Training Programme for Mentors” is an online course specially designed and developed for the National Initiative for Technical Teachers Training, All India Council for Technical Education, Ministry of Education, Government of India. The main objective of this course is to empower senior faculty members about the nuances of mentoring and transform the educational ecosystem. Due to the vast experience of NITTTRs and the module coordinators, the programme focused towards providing the insight about the eight-module developed to the inductee teachers. Our main focus is providing transformation to the participants. Since the training programme contain highly heterogeneous group, we decided to provide the gist of the content and establish scope to explore in detail.



Flow Diagram of Course Delivery Mechanism

After completing the course, the participants will be able to:

1. Explain the features of eight inductee modules.
2. List the characteristics of mentor.
3. Design the mentoring programme as per mentee characteristics.
4. Implement ground rules to help mentee in completing the programme.
5. Evaluate the mentee as per the stipulated rubrics.

Participants are expected to login into the course Learning Management System deployed through MOODLE portal to complete the learning task, provide reflection about learning, assignments and participate in discussions. Discussion postings must be made throughout the week to receive full credit. Our expectations are very high on participation, since this course is focused to teachers, who will be designated as Mentors. We strongly believe learning take place only through activities.

Handholding – Scaffolding Group

In order to provide uninterrupted learning experience, exclusive telegram group was created and promoted the active discussion & collaboration. The group augmented their learning and acted as a scaffolding structure.

The participants raised their queries and it is answer by the coordinators/resource person's/peer members. It was active peer-to-peer group. To join the Telegram group click the following link <https://t.me/+3YpdgsGRPpRjYzJI>



Course Delivery Platform:

The entire training programme will be delivered through Google Meet. Please register for NITTT - Mentor Training Programme using the following link.



MOTP - 13 -NITTTT - 22-26 AUGUST 2022

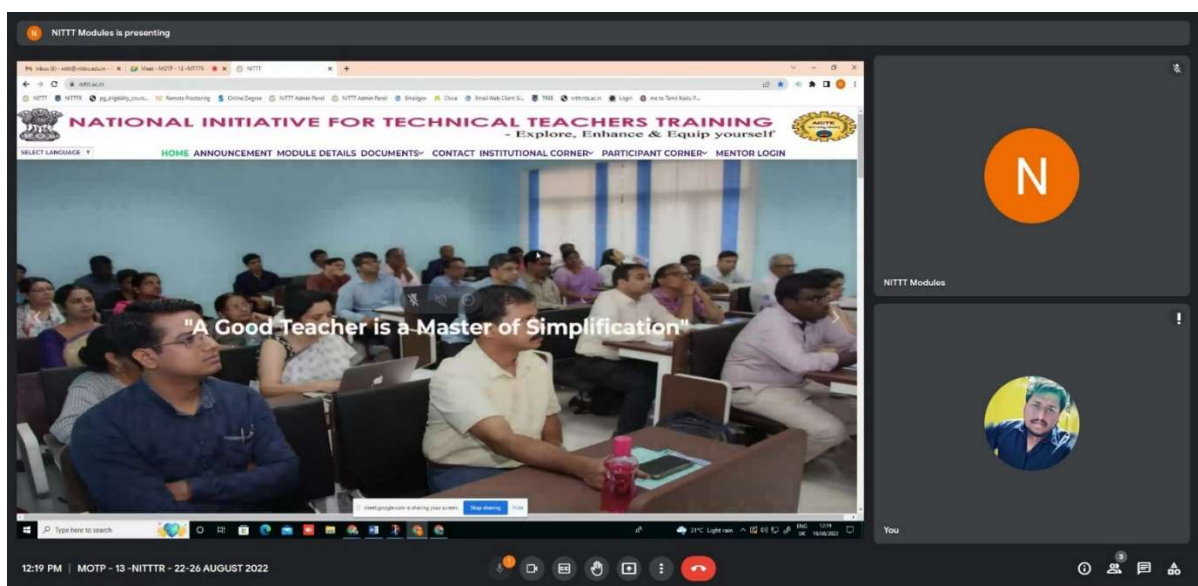
August 22 – 26, 2022

Google Meet joining info

Video call link: <https://meet.google.com/vyt-auyh-xja>

Or dial: (US) +1 361-248-9117 PIN: 560 913 828#

After login to the meet link, you will be joining to the training programme. In the video conference mode, you have a facility of asking question, hand raise, Group activity, polling activity and sharing activity.



Course Schedule

Time Date	I 10.00 am to 11 .00 am	II 11.15 am to 12.15 pm	III 2.00 pm to 3.00 pm	IV 3.15 pm to 4.15 pm
22.08.2022	Training Policy perspective, Purpose of mentoring & Role of Mentors (GJ)	LMS and NITTT Portal (VSN / PS)	Features of Module I (PM)	Insight about: Module I Rubrics (PM)
23.08.2022	Features of Module II (AAK)	Insight about: Module I Rubrics (AAK)	Features of Module III (AK)	Insight about: Module III Rubrics (AK)
24.08.2022	Features of Module IV (CM/SSK)	Insight about: Module IV Rubrics (SSK/SSM)	Features of Module V (GJ)	Insight about: Module V Rubrics (GJ)
25.08.2022	Features of Module VI (VSN)	Insight about: Module VI Rubrics (VSN)	Features of Module VII (PKT)	Insight about: Module VII Rubrics (PKT)
26.08.2022	Features of Module VIII (RW)	Insight about: Module VIII Rubrics (SD)	Online Assessment, Feedback and Valedictory	

11.00 to 11:15; 12:15 to 02:00; 03:00 to 03:15 – Lunch Break / Health Break

PM: Prof. P. Malliga, NITTTR Chennai, Email: malliga@nitttrc.ac.in ; Ph: +91- 9380342066.

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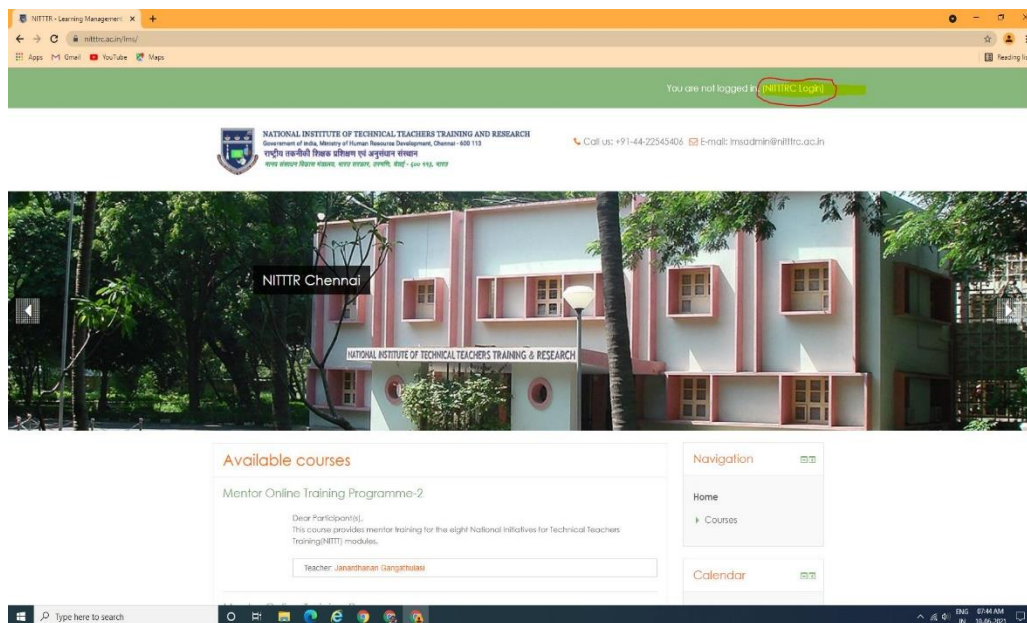
GJ: Prof. G. Janardhanan, NITTTR Chennai, Email: jana@nitttrc.ac.in; Ph: +91-9445520968

PS: Er. P. Subramanian, NITTTR Chennai, Email: subramanian@nitttrc.edu.in; Ph: +91-9884611126

Course Learning Management System – MOODLE

The participants have been sent with an invite to join in the course LMS as a student.

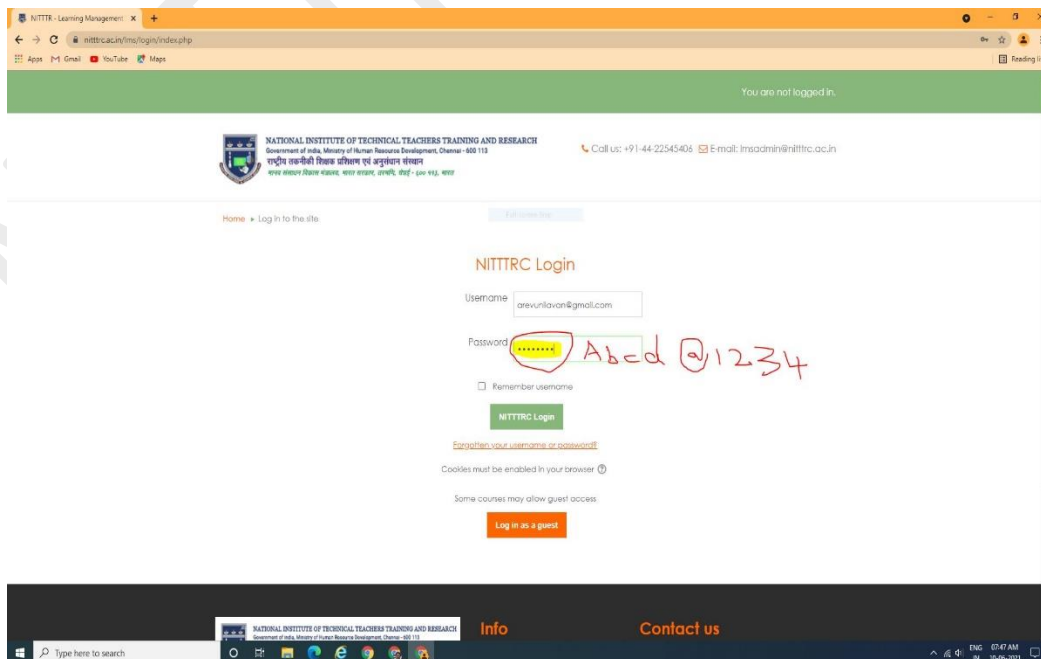
a) Step 1: visit: www.nitttrc.ac.in/lms



b) Step 2: Login into the LMS Portal:

Enter your registered email ID in Username

Enter the default password: Abcd@1234



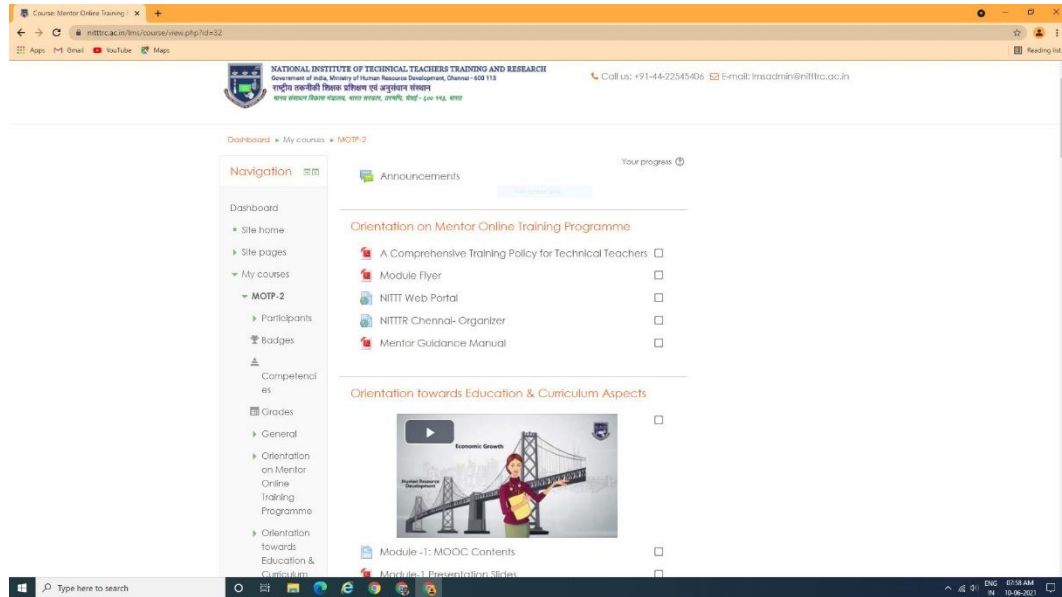
c) Step 3: Change the default password:

The screenshot shows a web browser window with the URL `nitttrcac.in/login/change_password.php`. The page header includes the NITTTR Chennai logo and contact information. The main content area is titled 'Change password' and features a navigation sidebar on the left with links to 'Dashboard', 'Site home', 'Site pages', 'My courses', and 'MOTP-2'. The 'My courses' link is highlighted. The main form area contains a message: 'You must change your password to proceed.' Below this, there is a 'Change password' section with a 'Username' field containing 'arevunilavan@gmail.com'. A password requirement note states: 'The password must have at least 8 characters, at least 1 digit(s), at least 1 lower case letter(s), at least 1 upper case letter(s), at least 1 non-alphanumeric character(s) such as *, -, ., or #'. There are three password input fields: 'Current password', 'New password', and 'New password (again)'. A 'Save changes' button is located at the bottom right of the form.

d) Step 4: Click “My courses” tab and then click “MOTP-2” tab to access the course contents.

The screenshot shows the NITTTR Chennai dashboard. The 'My courses' tab is selected in the navigation sidebar, and the 'MOTP-2' course is highlighted. The main content area displays the 'Course overview' for MOTP-2, showing a 'Timeline' and 'Courses' section. The 'Courses' section is currently empty, displaying 'No upcoming activities due'. The right sidebar contains several widgets: 'Private files' (No files available), 'Online users' (Last 5 minutes: 2), 'Latest badges' (You have no badges to display), and 'Calendar' (June 2021).

e) Step 5: view your course: Mentors Online Training Programme (MOTP-2)



If you find any difficulty in login to portal, kindly contact our technical team

Er. P. Subramanian, Email: subramanian@nitttrc.edu.in; Ph: +91-9884611126

Recording of the session:

At the end of the day, the presentation file and lecture recording will be uploaded in the course LMS. It will reinforce and scaffold the learners.

Questionnaire Survey

In this course, we wish to obtain the views of the mentors on technical educational scenario of our country. This survey is purely for preparing policy note to the government.

☐ Past, Present and Future of technical education.
☐ Exposure to ICT Tools
☐ Professional Ethics and Sustainability
☐ Redefining pattern of Assessment and its challenges
☐ Administration and Leadership Ability.

Course Content – Overview about Eight Modules



Course Evaluation for certification

The evaluation for the participants is through activities /assignment and it is grouped under five major cluster. The evaluation methodology is explained clearly and it is mandatory to score 50% marks in order to get certified as trained Mentor.

Cluster # 1: MCQ Based Quiz - (24 Marks)

The participants will be taking online quiz focusing towards the topic & objective of the daily content. Automatic graded quiz will provide the learners to gauge their understanding of the content. It is time bound quiz and there is hard deadline. Each day 6 MCQs (Monday to Thursday).

Cluster # 2: Preparation of Session Plan (10 Marks)

Each participant is expected to prepare the session plan after the Module 4 discussion. (To be administered after presentation of Module 4 and to be submitted on the 5th day of the MOTP). Please refer Template/ sample session plan given in Annexure I. The cluster 2 and 3 designed and administered by NITTTR Bhopal.

Cluster # 3: Preparation of Mentor Plan (10 Marks)

Mentor Plan preparation (10 Marks) as per the format given. (To be administered on the 5th day of the MOTP and to be submitted within 5 days after completion of the MOTP. Please refer Template given in Annexure I. The trainees are expected to submit these assignments in .pdf format through LMS. The evaluation of these assignments will to be done based on the criteria mentioned in each of the assignments.

Cluster # 4: Questionnaire Survey / Attendance (10 Marks)

The participants will be submitting the questionnaire survey as a part of the learning exercises. Around five survey is conducted to prepare the national document. The identity of the individual is highly confidential and only the abstract of the survey is presented in the report. Completing this questionnaire should take about 10 to 20 minutes of your time and not longer.

Cluster # 5: Summative Assessment (26 Marks)

The participants will be taking online quiz focusing towards the topic & objective of the unit content. Automatic graded quiz will provide the learners understanding of the content.

It is important to react on your first impression/feeling.

1. The evaluation of overall performance of each of the trainee shall be done out of **80 marks**.
2. Finally, the certificates will be issued to the trainee who have secured aggregate minimum **50 % marks i.e. (40 marks)** in all the quizzes, summative achievement test, submission of descriptive assignments and questionnaire survey /attendance. It is mandatory to attend all the sessions, attempt all the quizzes, and submit all the assignments in time.

To get certified the participants need to score minimum 50% in the assessment

***Great Teachers are made, not just born. Are you ready for the journey? ...
I hope the participants had a great learning experience.***

Happy Learning



.....

Submission Assignments 1 (Template)
Due date of submission

- a) Your Name:
- b) Institution Name and Address..... State
- c) Name of UG/Diploma Programme:
- d) Mobile No.
- e) Email.....

Classroom Session Plan Preparation for a session of 45-60 minutes (10 Marks)

Criteria: The activities in the SESSION PLAN should reflect the following criteria.

1. CO and session outcomes written correctly - 1 mark
2. Hooking the attention and development of teaching points- 1 mark
3. Interactivity/ Involvement - 1 mark
4. Use of relevant media - 2 mark
5. Use of instructional method other than lecture method - 2 mark
6. Eliciting performance - 1 mark
7. Any evidence of 'retention and transfer of knowledge' - 1 mark
8. Submission of assignment – 1 mark

Prepare a session plan for a classroom session of 45-60 minutes using the suggested session plan format given in **Module 4 - Lesson 15** on 'Classroom Session Plan Preparation' (Page 6). Ensure that the principles of learning and the **Gagne's nine instructional events** are taken care of and that the plan is categorized in three phases of

- a) introduction
- b) development of content, and
- c) Consolidation.

You can also refer the sample plan given in **Appendix 1** of (Module 4) **Lesson 15** and the criteria for validating the instructional session plan given in **Table 1: Proforma - Criteria for Validating the Instructional Session Plan (Page 6)** of **Lesson 16** for completing this practice task in an effective manner. (For your convenience the format and sample lesson plan are given herewith.)

(A) Session Plan Format (Sample)

- a) Semester:
- b) Course Code and Course Name:
- c) Relevant Course Outcome (**CO**):
- d) Unit (Topic) Number with Title:
- e) Sub-topic Title:

- f) Session Duration: 45-60 minutes
- g) Participants: UG/ Diploma Students
- h) Session Learning Outcomes (starting with action-oriented observable and measurable verb):
- i.
 - ii.
- i) Entry level knowledge and skills of students
- i.
 - ii.
- j) Equipment required in Classroom/ Laboratory/ Workshop
- i.
 - ii.
- k) Instructional media required
- List of instructional media available
 - i.
 - ii.
 - List of instructional media to be prepared
 - i.
 - ii.
- l) Instructional strategy and methods to be used should be developed in the following sequence

Time required	Teaching Points	Teacher's Activity	Student's Activity	Media to be used
3 minutes	Introduction			
4 minutes	Development a) 1 st teaching point			
5 minutes	b) 2 nd teaching point			
.....	c)			
and so, on				
.....				
.....	n)			
2 Minutes	Consolidation			
60 minutes				

(Please prepare the Mentor Plan in Word Format, convert it into PDF format and then only upload the PDF file in the LMS under heading 'Submission Assignment 1')

Session Plan (Sample)

- a) **Name of Teacher:** xyz
- b) **Name of UG/Diploma Programme:** UG Programme in Mechanical Engineering
- c) **Semester:** Four
- d) **Course Code and Course Name:** Fluid Mechanics
- e) **Relevant Course Outcome (CO):** Interpret the properties of Lubricants
- f) **Unit (Topic) Number with Title:** III - Oils and Greases
- g) **Sub-topic Title:** Viscosity of lubricants and their applications
- h) **Session Duration:** 60 minutes
- i) **Participants:** Trainee Teachers
- j) **Session Learning Outcomes** (starting with action oriented verbs) :
- Justify the need of additives.
 - Select the additives for the given situation
- k) **Entry level knowledge and skills of students.**
- Purposes of lubrication
- l) **Equipment required in Classroom**
- Computer with multimedia projector.
 - White board.
- m) **Instructional media required**
- List of Media Available**
 - Sample lubricant.
 - Sample Additive.
 - List of Media Available**
Nil.
- n) **Instructional strategy and methods to be used should be developed in the following sequence.**

Time	Teaching Points	Teacher's Activity	Student's Activity	Visual/Any other material
2 mins	<u>INTRODUCTION</u> - Oils used mainly as lubricants - Oils also used for transmitting power, rust prevention - Additives added to oil	- Ask why oils are used? (For lubrication) - Ask any other purpose (For transmitting power for cooling as a cutting fluid or for rust prevention) - Tell additives added to give special properties - Write topic on blackboard - State objectives/ LOs of the session to understand different types of additives - Show PPT of objectives/ LOs	Student answer question Trainees answer/question give example	PPT.1 showing title of the session and objectives/ Learning Outcomes
	<u>DEVELOPMENT</u>	- Define additive - State why different additives for same effect	Trainees give answer	Visual of an automobile (with engine

Time	Teaching Points	Teacher's Activity	Student's Activity	Visual/Any other material
	a) <u>Additives</u> are chemicals added to give special properties b) Different additives used for achieving the same effect when oils work under different conditions <u>Detergents and Dispersants</u> a) Used for keeping insoluble suspended in the oil to prevent sludge formation b) Detergents used at high temperatures and dispersants at low temperatures c) These are contained in I.C. engine oils <u>Rust Inhibitors and corrosion inhibitors</u> Used for inhibiting chemical corrosion and rusting These are contained in most machinery lubrication oils <u>Anti-wear additives</u> a) Used to reduce wear (between sliding or rubbing surfaces) b) Examples cams, piston in cylinder <u>Viscosity index improving</u> Used to lessen the amount by which the thickness of oil changes with temperature Example internal combustion engine	- Ask what a detergent is - Link with detergents and dispersants in present context - State the difference between detergent and dispersant - Ask for examples - Show PPT of an automobile with engine oil containing detergent - Distribute handout in which figures have been drawn - Ask or explain what inhibition is - Link with rust and corrosion - Show PPT of a bearing with lubricating oil - Ask what is wear? Where wear occurs? - Link trainees answer to explain - Show PPT of sliding surface - Ask question, 'what happens when temperature of oil increases? - Link the answer with requirement in this case - Give example of use/obtain example by questioning	May give examples of detergent available in market Trainees give examples Trainees fill up the blank in the figure Trainees explain 'inhibition' Trainees fill up the blank in the figure Trainees answer give example Trainees fill up the blank in the figure Trainees answer it becomes thin or viscosity decreases Trainees give example ppt fill up the blank in the figure	Visual of a bearing (with point emphasizing rust inhibitors and corrosion inhibitors in oil) oil containing detergent) Visual of a piston- cylinder mechanism to show anti-wear property of additive PPT of an internal combustion engine to show example of viscosity index improver
	<u>CONSOLIDATION</u> a) Definition of additive b) Additives type - Detergents and dispersants - Rust inhibitors and corrosion inhibitors - Anti-wear additives - Viscosity index improvers - Examples of each type	- Ask trainees to fill in the gap in the statement. Statement on PPT. - Additives used in oil to give- (special properties) - Types of additives is summarised on a magnetic board by magnetic cut outs. - Show examples (different then before) what property is important in each case?	Trainees fill in the gap Trainees revise the list Trainees give answers	PPT of examples

Time	Teaching Points	Teacher's Activity	Student's Activity	Visual/Any other material
	Home assignment/ further learning activity	Give home assignments based on the topic learned		

Table 1: Proforma - Criteria for Validating the Instructional Session Plan

Elements of Planning	Criteria	Response: 'Y' for Yes, 'N' for No, 'NA' for Not applicable	Remarks (If any)
Format	a) Is any component in the format missing? b) Is information under each head provided?		
Objectives/ Learning Outcomes	a) Are objectives/Learning outcomes stated? b) Have they been appropriately stated in terms of single behavior? c) Are they achievable within the time specified? d) Are they achievable by the method and strategy used? e) Are they appropriate for the topic?		
Pre-requisites	a) Have they been properly specified? b) Are all these stated necessary for this lesson?		
Media hardware & Equipment required	a) Is any media hardware equipment which is required missing from the list? b) Is anything which is mentioned not required? c) Are all the required media hardware/equipment available in working condition? d) Has the teacher ensured that all the equipment is working? e) Has the teacher tried operating the same?		
Media and Material required	a) Are all the material and media identified appropriate for the objectives stated? b) Are all of them available? c) Have the media and material which are not available been prepared by the teacher? d) Are all the media and material properly prepared? e) Suggest /think of possible improvements or alternative media and material. f) Is the content on media accurate?		
Treatment			
a)	Introduction		
	i. Is it proper? ii. Is it motivating and interesting? iii. Does it relate the present learning to previous one? iv. Have the objectives been stated (explicitly or implicitly)? v. Is it too short or too long?		
b)	Development		
	i. Is the development given step by step? ii. Is the sequence appropriate and systematic? iii. Are the teacher activities and teacher trainees' activities relevant with proposed teaching points? iv. Are the teaching strategies and methods planned appropriate for the objectives and teacher trainees?		

Elements of Planning	Criteria	Response: 'Y' for Yes, 'N' for No, 'NA' for Not applicable	Remarks (If any)
	v. a) Is active participation of teacher trainees planned? b) Is it adequate? c) Suggestions to increase or improve active participation		
	vi. Is enough stimulus variation provided? (Different methods, activities, media, demonstration, questioning, assignment etc.)		
	vii. Has each concept, principle etc. been explained on the basis of maxim of teaching such as known to unknown, simple to complex, concrete to abstract etc.?		
	viii. Are the examples, non-examples, problems, etc. planned clear and relevant?		
	ix. Are the proposed media, other resources appropriate for effective and efficient teaching- learning session?		
	x. Are the proposed questions framed clearly and properly?		
	xi. Are the proposed questions appropriate at that stage?		
	xii. a) Have some learning activities like assignments, practice etc. been included? b) Are they appropriate?		
	xiii. Any suggestions for improvement		
c)	Consolidation		
	i. Is the planned consolidation/summarisation appropriate?		
	ii. Has integration of present learning with previous one planned?		
	iii. Has any attempt been made to assess achievement of objectives?		
	iv. Has any homework been planned?		
	v. Have any references or additional reading been suggested?		
	vi. Has seeding for the next lesson been planned?		
	vii. Any suggestions for further improvement.....		
d)	Balance and time planning		
	i. a) Has the time planning done? b) Is it appropriate?		
	ii. Is the plan balanced with respect to the time planned for introduction, development and consolidation?		
	iii. If the plan is for a long session, does it include introduction and consolidation at appropriate locations?		
	iv. Can the plan be implemented within specified time?		
	v. Has some flexibility planned for potential uncertainties?		

Submission Assignments 2 (Template)

Due date of submission

Mentor Plan Preparation (10 Marks)

Criteria: The activities in the MENTOR PLAN should reflect the following criteria.

1. Self-study of e-content of 1 to 8 NITTT modules by mentors themselves - **1 mark**
2. Interpret rubrics and assessment criteria of 1 to 8 NITTT modules to the inductee teachers- **1 mark**
3. Organise 2-day orientation for industrial training for inductee teachers - **1 mark**.
4. Observe performance of inductee teacher during different tasks being performed by them (such as teaching in class, lab, workshop, dealing with students, co-curricular, extracurricular and administrative duties) for attainment of the 8 competencies (page 8 of MGM) related to eight modules - **4 marks (1/2 mark for each module)**.
5. Based on above observation (in criteria no 4) guide and counsel inductee teachers periodically to improve performance related to 1-8 modules - **1 mark**.
6. Preparation of summary reports - **1 mark**.
7. Submission of assignment – **1 Mark**

1. Name of Mentor.....
2. Undergraduate or Diploma Institution.....
3. Institution Name and Address.....
4. Govt./Aided/Self-financed
5. Name of State.....
6. Mobile No.
7. Email.....

Action Plan for Mentoring Inductee Teachers in Phase II using the Rubrics (including Industrial Training)

Sl. No.	Activities	Semester Duration						Assess ITP
		July	Aug	Sep	Oct	Nov	Dec	
1	Orient Inductee teachers on FIP II on first day of FIP in the institute	■						
2	Add activities of Mentor in sequence here. Please do not copy this plan from any of your colleague or other trainee. It will be treated as plagiarism.	■						
	The activities which could be included with respect to							
	a) Activities before start of On-the-job-Training of the inductee teacher							
	b) Activities during the on the job training, including industrial training							
	c) Activities after the on the job training.							
								
n th	Assess ITP							

Any other plans.....

(Please prepare the Mentor Plan in Word Format, convert it into PDF format and then only upload the PDF file in the LMS under heading 'Submission Assignment 2')

Due date of submission