Greetings and welcome to NATE module 2 unit 10 on implement face.

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In the last unit we understood the process of development phase which constitute the third phase of ADDIE. Now, the fourth phase of ADDIE is the implementation phase.
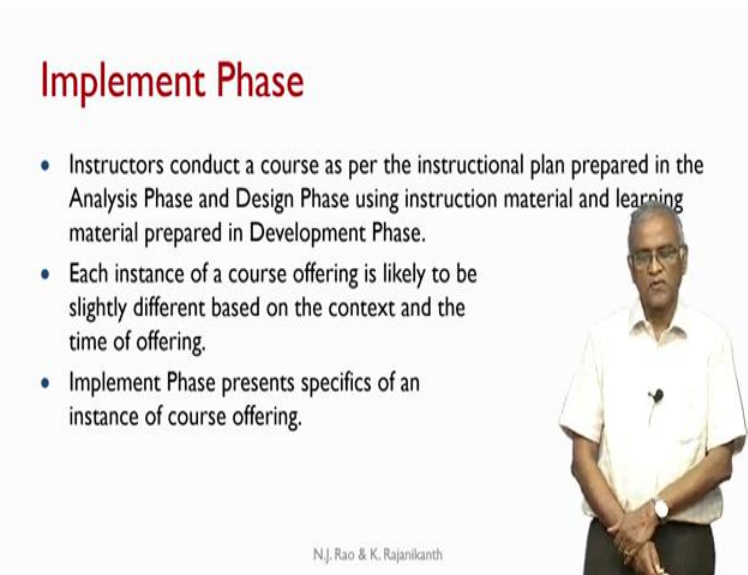
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We, what we try to do in this we try to understand the implement phase its sub processes which include syllabus planning for resources and instructors perception of students abilities and motivation. There are three elements in this one is syllabus, the other is planning for resources the third one is instructors perception of students abilities and motivation. There are many more activities in the implementation phase, which will which will explore in the following unit.

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Implement Phase

- Instructors conduct a course as per the instructional plan prepared in the Analysis Phase and Design Phase using instruction material and learning material prepared in Development Phase.
- Each instance of a course offering is likely to be slightly different based on the context and the time of offering.
- Implement Phase presents specifics of an instance of course offering.

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Now, after analysis, design and development, we got the entire assessment we wrote the course outcomes and then we designed the assessment and we created instruction material and identified learning material. After all that, then we have to actually conduct the conduct the course. But what happens each time you conduct a course it becomes a specific instance of offering the course I may have to offer the course either to multiple batches or for several years one after the other. So, what happens is, anytime I conduct a course, it becomes one specific instance of offering the course. Now, implement phase present to specifics of an instance of the course offering.

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Processes for the Elements of Implement Phase

- Syllabus
- Planning for resources
- Instructor's perception of students' abilities and motivation
- Instruction Schedule
- Observations on Instruction
- Additional sessions conducted by the instructor beyond the scheduled hours

- Assessment Instruments
- Feedback to students after every assessment
- Observations on Assessment Instruments and Student Performance
- Student feedback during the session
- Tracking students

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We will again these are these suggested processes for the elements of implement phase. Just let me read through this one is writing syllabus, planning for resources, instructors perception of students abilities and motivation. The three of these we will be considering in this module or in this unit and then instruction schedule observations and instruction.

Additional sessions conducted by the instructor beyond the schedule diverse assessment instruments, feedback to students after every assessment, observations and assessment instruments and student performance, student feedback during the session and tracking students while the list looks very long, it is not that very complicated in the end once you try to do all these things electronically, it is not that complicated for many of them you have standard templates that you can make use of.

Syllabus

- A well written **syllabus** guides faculty and students alike.
- It provides students with information about the broad aim of the course, the specific course outcomes the student is expected to demonstrate at the end of the course, the instructional plan, work expected of the students, how performance will be evaluated and several other issues.
- By distributing a written syllabus at the beginning of the course, the instructor can minimize student misunderstandings about expectations for the class.
- Syllabus can also keep faculty on track throughout the semester and help to ensure that the course does not stall at any one point (Joyce and Marilyn 2004).

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Now, syllabus the word syllabus is understood somewhat in a different way in India compared to the other countries. In India syllabus constitutes the list of topics on the textbooks and reference books that completes the syllabus as far as the Indian context is concerned. But it is not so, especially in western universities. It kind of a well written syllabus guides, faculty and students alike.

That means you are trying to write a come either like a contract. All the details about the course, are written in advance. And you said this is how the course is going to be conducted. To that extent, students are very clear. What is it that they are getting into? And similarly, the teacher is very clear in what sequence or what are the things that is expected to do. So, it provides the students with information about the broad aim of the course.

The specific course outcomes the student is expected to demonstrate at the end of the course, the instructional plan work expected of the students, how performance will be evaluated and several other issues. And the distribution of written syllabus at the beginning of the course, by doing so, the instructor can minimize student misunderstanding about the expectations from the class.

So, first, any misunderstandings are cleared when you write a good syllabus. So, there is a even a book written on how to write syllabus by Joyce and Madeline. Syllabus can also keep the faculty on track throughout the semester and help to ensure the course does not stall or deviate at any one point. It does not go off tangentially or it does not get stuck at one place.

Components of Syllabus

- **Aim of the Course:** One sentence that explains the purpose/goal of the course.
  Example: Analog Circuits and Systems
  To design analog circuits and systems that perform signal processing functions, and signal generation using the devices including Op-Amps, amplifiers, multipliers and comparators.
- **Course Overview and Context:** Relationship of the course to the rest of the program, the nature of the course, its importance to the profession and the approach proposed to be taken by the instructor as created in the Analysis Phase

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Which has the competence of syllables. One is to write aim of the course one sentence of explain explained explains the purpose or goal of the course. Let me give one example one course our purposed course are analog circuits and systems the aim is to design analog circuits and systems that perform signal processing functions and signal generation using devices including op amps, amplifiers, multipliers and comparators.

Now, there is not too much of detail is given, but there are certain things are made clear first of all this course is not relay not concerned with designing circuits using discrete electronic components like transistors. It uses the basic competence with which it works is op amps any other type of amplifiers multipliers and comparators and then what do you do with them you perform certain signal processing functions.

Of course there are infinite number will only handle certain representative ones at the first level and also how to generate signals. So, in one sentence you are trying to communicate to the outside world as well as to your students, what is the aim of the course. Then you write course overview and context which we have explained, it deals with relationship of the course to the rest of the program, the nature of the course, its importance to the profession, and the approach proposed to be taken by the instructor. We have already created this in the analysis phase, you just have to bring that and put it here.

And then you may have certain attendance policy. This may be specific to your course, or it may be department or Institute's policy. You just have to follow that. But you are you are making it clear, but very specifically, that means 75 percent attendance is compulsory, all such things you are trying to write there and then you write the course outcomes.

Course outcomes are as we have already decided in the analysis phase, it is something like 6 plus or minus 2 for a course. And then if necessary, we elaborate course outcomes into course competencies, which can be anywhere from 10 to 20. And then, we write the content of the course, with which everybody is familiar it is essentially a list of topics. You can write them as, group them as you please like separate paragraphs or you can write continuously the list of topics.

Then, you give the learning resources, identify the textbooks even you identify the textbooks you can you can also annotate it specifically, chapter one to two or mend for CO 1 and song like that you can further what he qualify the textbooks that you are going to use. And you can give references and also internet links these days can be given but do not give too many.

Do gives specific ones and also annotate them right one or two sentences next to the link say, for what purpose are you going into that into interlink that internet link. And then you give your assessment plan as decided in the design phase. So, what as you can see most of it is already done at different places. You are all bringing it together, and maybe filling up a few more detail.

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Components of Syllabus (3)

- **Instruction schedule:** Classroom and laboratory schedules giving specific dates
- **Assignments:** The actual assignments that the instructor proposes durir the semester including the dates they would be made available, time by which the students need to submit, and the nature of assignment (group or individual)
- **Evaluation procedures for tests and assignments:** Evaluation procedures and rubrics the instructor proposes to use for tests and assignments.
- **Late assignment submission policy:** The instructor's stipulations regarding late submissions.

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And then you will instruction schedule this also is required by the department generally, the classroom and laboratory schedules, giving specific dates here what we do in a slightly differ, we give it in terms of instructional unit. And instructional unit may take anywhere up to 5 lecturer hours. In that case, all the days on which you are dealing with that instructional unit with those dates will be given. If we have 15 instructional unit, you will give the corresponding dates when you are going to handle that in the instruction schedule.
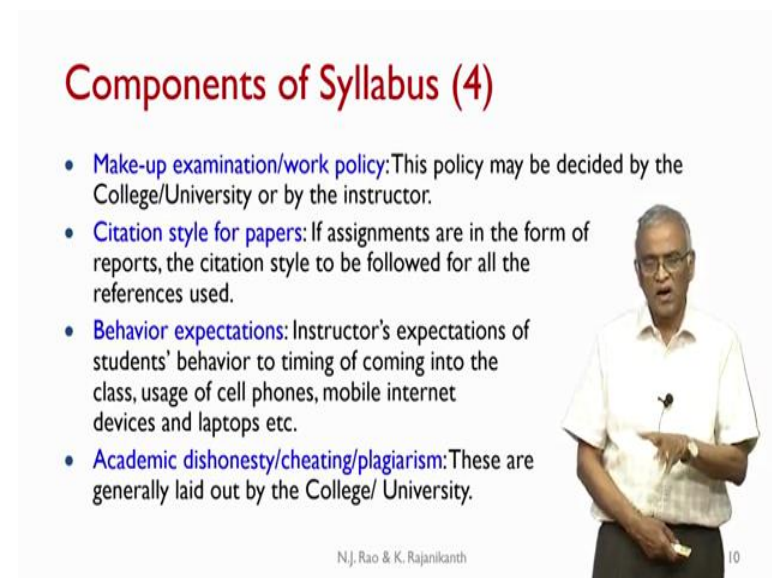
Then you talk about assignments, the actual assignments that the instructor proposes during the semester including the dates they would be made available, our time at which the student need to submit and the nature of the assignment. So, again it is instructor's choice. One is if you are using any kind of LMS you can create the assessment then this is our assignment.

And then hide it from the student until a particular point and then you say then it will be made visible to the students and the students are required to submit by a particular time. So, whatever rule that you want to follow, sometimes people say in some courses, they already write on the first day, the assignments they have to do or already given to them, the students are at freedom to kind of work on them as depending on their time availability. Then the next issue is evaluation procedures for tests and assignments.

Whatever procedure you want to follow the weightages that you want to give the rubrics the instructor proposes to you if he is using rubric he must make it very clear to the student. So, for both tests and assignments, what are the rubrics that you are using that means, what do you… what aspect of the assignment you consider important? What weightage you are likely to give to that will also serve as a guide to the students how to do it properly.

And then you may have some late assignment submission policy, if you say you have to submit by Monday, 5 a clock by 5 a clock on Monday, and if it is electronically, the system would not permit you to submit anything in such case what do you want to do? Again different people have their different approaches, somebody says late submission, you will lose 1 mark. If it is by 2 days you will lose 4 marks and so on. So, that whatever late assignment submission policy you have, that has to be made very clear, and you have to stick with that.

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Components of Syllabus (4)

- **Make-up examination/work policy:** This policy may be decided by the College/University or by the instructor.
- **Citation style for papers:** If assignments are in the form of reports, the citation style to be followed for all the references used.
- **Behavior expectations:** Instructor's expectations of students' behavior to timing of coming into the class, usage of cell phones, mobile internet devices and laptops etc.
- **Academic dishonesty/cheating/plagiarism:** These are generally laid out by the College/University.

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Then makeup examination work policy. Here, if it is makeup examination in college may have its own policy if it does not have the instructor may have his own policy if somebody is not able to come to a laboratory that is not able to come for a class test, what should be done? Again, as I said these policies are normally decided at the college level. And if in any report you have to cite some papers, the citation style of the papers model should be given.

That means, whenever a instructor says whenever you want to cite a certain paper, you have to write in this particular format. And then also you can talk about you can actually write behavior

expectations. Instructors expectations of students behavior to timing of coming into the class usage of cell phones, mobile internet devices and laptops, whatever behavior expectations you have they can be very clearly mentioned. Academic dishonesty cheating plagiarism. Generally these are also generally related by the college or university.

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Components of Syllabus (5)

- **Instructor and Teaching Assistant contact information:** Information about where, when and how the instructor or teaching assistants can be contacted by the students outside the classroom for all issues connected with the course.
- **Accommodation of differently abled (Divyang) students:** Specific support systems available to the Divyang students.

Note: Delete the items that are not relevant to your course

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And in some cases, you may have teaching assistants, but many colleges, most of the colleges do not have the concept of teaching assistant. But if you have one, you have to give contact information about the teaching assistant and at what times says expected to be available to students. And then, do you if you have differently abled students now we have call them divyangs.

If you have some divyangs in your class, what kind of support systems are available for you? Especially in engineering programs you may not have, but we do have experience in some cases. We have people with walking disabilities, hearing disabilities, and so on in such a case what kind of specific arrangements are you making? So, as you can see, you have a long list of these things.

Some of them are relevant to you your context. Some of them are not the ones that are not relevant to your context just knock them out and the remaining items you need to prepare for and then that becomes that what we call the syllabus and preferably this syllabus should be made available on the department site for your course. You do not have to necessarily print and give it these days. You can just put it on the your course website.

Now, next we are going to look at planning for resources. Why do we have to do this? First of all, the number of students you have, obviously you have to pick corresponding classroom which can accommodate that many students then mainly the delivery technologies. In many colleges you have only some rooms that provide you LCD projector facilities, some rooms only provide you blackboard. So, you obviously you cannot do, you cannot project slides in a classroom that has only black blackboard.

So, you have to plan in advance make sure that you the choice of delivery technology and the resources needed to conduct the course have to be planned. And maybe the department will have some kind of a mechanism of getting together and trying to ensure that these needs are met. For example, if you have group discussions as a part of your, our small group assignment you want to give as a part of your course the classroom furniture should permit that. That means I must be able to three four people must be able to draw some chairs together and then discuss with each other work with each other.

But if you have a rigid benches, which are nailed down, obviously that kind of thing will not be possible. And if students are expected to work with their laptops and tablets in the classroom, or smartphones, then you need to have furniture, power supply connections and Wi Fi mostly Wi Fi modems should be available and make sure they do work. If they do not work. If any of them do not work.

Then you have no you cannot have electronic classroom. And issues will come in such a case. If a few students are have not brought their devices or somebody's device is not working. You have all kinds of such issues and you have to have a plan for it.

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For example, If you have LCD projector, it proposed to be use. You have to specify how the input to the projector is proposed to be handed, will there be one permanently fixed laptop in the classroom or the teacher will have to take his or her laptop to that. In which case, whether do you go to the class with a pen drive or with your laptop and when you go with the laptop, which can happen, the interface cable for the projector will have to be compatible with your laptop you have to make sure of that in advance.

And if one wants to use a learning management system, obviously, even if the teacher alone wants to use the LMS then necessary Wi Fi connectivity needs to be made available and if some instruction want to use flip charts, show large maps, show artifacts demonstrated device or conduct an experiment obviously, that will require corresponding facilities to be made aware to be made ready in advance. So, many of these things do require long term planning.

Without pre planning you cannot make these things happen, of course in a small setups where things are already known and everything is generally you expected to be working, you can just go with your laptop to the class and do it but many times it may or may not happen, you have you require considerable planning for this.

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Then the other issue is seen today equity and access. These are two important criteria for admission to higher education in India about 20 25 years ago, there were very small number of colleges, engineering colleges and then people were selected through elaborate process to enter those.

And there were also that only that many students who are keen on doing engineering but what happens because of the social pressure, you want equity people with in all kinds of social backgrounds, they want to have, they want to enter into the engineering, in engineering, education and access. It should be conveniently accessible to their extent that is why the colleges are set up in all kinds of places.

So, they become practically local colleges. So, what is the consequence of that? Because of this unprecedented growth sincerely 90s you have students in your classroom with widely varying capabilities entering into your engineering programs. And along with this widely varying abilities, you also have widely varying motivation. So, you have two important issues one is the ability and the other is motivation profile.

And these two will have great influence on your teaching and learning. Unless you match your teaching and learning with the ability and motivation profile, then the learning does not take place. So, you have to adopt to the kind of students that you have with you. And on top of that,

this will keep changing from year to year. Of course, these are all easily said then addressed in a particular college.

Normally what we suggest is some kind of a profile be created right when the students join the program. There are tests available. With the help of consulting in the psychologist, you can have a profile of every student with regard to his cognitive ability and motivation created. If you do not have such profile, the only proxy that we can use is the CAT entrance rank. CAT rank, I have to go by that otherwise, I am not of course you cannot assume that CAT than truly profiles the student. But if I do not have any other mechanism, I use that. But it is not difficult. Every time when the new students join in the first week.

You can have these profiles created. There are lots of form lots of ways of doing it. And all the queries the inputs from one consulting psychologist and the you will have profile and by enlarge that profile is valid for all courses. So, that profile is accessible to the teacher.

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Then based on that I can classify an approximate profile of students can be created like this with respect to ability and motivation. Here I showed indicatively five levels, you can create more levels or create less number of levels then you can say how many students are there at each level then I know where to pack my instruction. So, choose way of profiling students and then classify the students for this is for your own purpose. This need not be made, need not be made available

to the students or made public at all. And then based on this, you, you kind of start planning your instruction.

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So, first thing is we request to write the syllabus of your course, within the framework you are operating for a course you taught are very familiar with you write the syllabus taking making, are taking into account all the elements that we have proposed and if you share with us it will be great input to us. So, please do share with us.

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And in the next unit we will try to understand the remaining sub process which is a long list observations on instruction, additional sessions conducted, assessment instruments, feedback to students after every assessment, observations on assessment instruments and student

performance, student feedback during the session and tracking the student we will be looking at the sub process of implementation phase in unit level. Thank you very much.