

NBA Accreditation and Teaching- Learning in Engineering
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Lecture 56
Faculty Information and Contributions

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M3 UI6: Criterion 5:
Faculty Information and
Contributions

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Recap

- Understood how to measure performance and professional activities of students using metrics provided by NBA (Criterion 4)

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Greetings and welcome to NATE module 3 unit 16. On NBA criterion 5 related to faculty information and contributions. In the previous unit we understood how to measure the

performance and professional activities of students using metrics provided by NBA as per criterion 4.

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M3 UI6: Outcome

- Understand the indicators for Faculty Information and Contributions (Criterion 5)



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Now in this unit, our goal is to understand the indicators for faculty information contributions, which is which constitutes criterion 5.

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Criterion 5. Faculty Information and Contributions (Tier II)

	Sub-Criterion	Marks
5.1	Student-Faculty Ratio (SFR)	20
5.2	Faculty Cadre Proportion	25
5.3	Faculty Qualification	25
5.4	Faculty Retention	25
5.5	Innovations by the Faculty in Teaching and Learning	20
5.6	Faculty as participants in Faculty development /training activities /STTPs	15
5.7	Research and Development	30
5.8	Faculty Performance Appraisal and Development System (FPADS)	30
5.9	Visiting/Adjunct/Emeritus Faculty etc.	10

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Now, there are a very large number of sub criteria of criterion 5 and these slightly differ from tier 2 to tier 1. So, let us take a look at the sub criteria related to tier 2 institutions. Here, you have nine of them. These include student faculty ratio 20 marks, faculty cadre proportion 25 marks and faculty qualifications 25 marks, faculty retention 25 marks, innovations by the faculty in teaching and learning 20 marks, faculty as participants in faculty development and training activities are STTPs 15 marks, research and development 30 marks, and faculty performance appraisal and development system 30 marks, visiting, adjunct or Emeritus faculty etc 10 marks.

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Criterion 5. Faculty Information and Contributions (Tier I)

	Sub-Criterion	Marks
5.1	Student-Faculty Ratio (SFR)	20
5.2	Faculty Cadre Proportion	20
5.3	Faculty Qualification	20
5.4	Faculty Retention	10
5.5	Faculty competencies in correlation to Program Specific Criteria	10
5.6	Innovations by the Faculty in Teaching and Learning	10
5.7	Faculty as participants in Faculty development/ training activities /STTPs	15
5.8	Research and Development	75
5.9	Faculty Performance Appraisal and Development System (FPADS)	10
5.10	Visiting/Adjunct/Emeritus Faculty etc.	10

They will all add up to 200 marks for the faculty. Whereas, when you look at tier 1 institution, quite many of them are the same or similar to what were offered in tier 2. But you have one extra criterion now you have 10 sub criteria. Once again, student faculty ratio 20 marks, faculty cadre proportion 20 marks, faculty qualification 20, faculty retention is 10, faculty competence in correlation to programs specific outcomes 10.

This particular one is specific to tier 1 institution, which does not exist in the case of tier 2 institution. Innovations by the faculty in teaching and learning 10 marks, faculty as participants in faculty development and training activities is 15 marks. The major difference between the tier 1 and tier 2 institution is research and development which has 75 marks for tier one institution, whereas it is 30 marks in the case of tier 2 institution. So what it means is, the NBA expects tier 1 institutions to have their faculty get involved more in research and development. And 5.9 is

faculty performance appraisal and development system 10 marks and visiting agent and Emeritus faculty 10 marks.

So the major difference between tier 1 and tier 2 institution is the weightage that is given to research and development and an additional sub criterion related to the competencies in correlation to PSOs. But in both the cases the number of marks for criterion 5 are 200.

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Criterion 5

- NBA recognizes the key role of faculty in facilitating learning
- There are several dimensions to an effective teacher:
 - qualification
 - relationship with the institution
 - continuing concern with the teaching-learning processes
 - engaging in knowledge production (R&D)
 - continuous learning
- Good instructional situation is needed for teachers to be effective and students to learn well.

Now, let us look at the specificity of criterion 5, out of thousand marks 200 marks are allocated to, to the faculty information and their activities. Why is it so? NBA recognizes the key role of faculty in facilitating learning, they consider good faculty are required and they have to perform well for the students to learn better. And to that extent, faculty are treated as key change agents and they do play a key role.

And here, there are several dimensions to an effective teacher as recognized by NBA, We are calling it effective teacher or merely instead of merely calling good teacher, effective teacher is one who facilitates better learning by the students. What are the dimensions of an effective teacher? Qualification, relationship with the institution, continuing concern with the teaching learning processes, engaging in knowledge production, which is another way of saying R and D and continuous learning.

So, let us take a look at it, obviously the teachers should have right qualification. If you have a PhD, it is still better. And relationship with the institution is really, really key issue, if the teacher does not feel comfortable on any aspect, whether it is related to the kind of decision making or the salary structure or any of that, once the relationship is not that very satisfactory, it has a great influence on the quality of teaching and learning.

And the other dimension is an effective teacher has a continuous concern with the teaching learning process. That means, you should constantly look at should keep a watch on what is happening, whether whatever procedures that is following whether the students are learning, what kind of minor corrections that needs to make, what kind of improvements to make. That means, there is a certain amount of time and thought process that should go into understanding and improving the teaching learning processes.

And R and D is a must unless you deal, you engage with the knowledge, you cannot help your students to also engage with the knowledge, engagement with the engagement with the knowledge corresponding to your subjects what it would mean is you are utilizing the knowledge for something or you are producing your knowledge by way of research or engaging with it in terms of a development, development.

Let us say you are doing certain product development and so on, or even you are producing some new, interesting instructional material, but something that you are constantly engaging with the knowledge production and then you are willing to learn continuously, then only you can expect your students also to learn continuously. You cannot freeze yourself in time and just repeat whatever that you have been doing over the years.

And good instructional situation is needed for teachers to be effective on students to learn well. Now, we have elaborated on instructional situation, that means, how decisions are made, who makes the decisions, and what kind of infrastructure that you have. And do they teach to do the teachers and students do they feel comfortable with what is happening? If the instructional situation is not really good, the attention goes on to this, these factors rather than on learning.

So, good instructional situation is needed. And it is besides the college or the management has to management needs to create this. It is a teachers also who can contribute a great deal to

improving the instructional situation. How do they do it? By making students comfortable to ask questions. We have elaborated on this particular point, students should not feel threatened in a classroom or should never be belittled in a classroom.

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Norms

- Academic year is considered from July to June.
- If the SAR is submitted before 30th September, then the CAY shall be the previous academic year and if the SAR is submitted after 30th September, then the CAY shall be the running academic year for the purpose of data consideration and calculations.
- CAY: Current Academic Year
- CAYm1: Current Academic Year minus 1 = Current Assessment Year
- CAYm2: Current Academic Year minus 2 = Current Assessment Year minus 1

So, a teacher can also greatly contribute to the improving instructional situation. Now, there are some norms that are specified by NBA itself. Academic Year is considered from July to June. If a SAR is submitted before 30th of September, then CAY current academic year shall be the previous academic year and if a SAR is submitted after 30th September, then the CAY will shall be the running academic year for the purpose of data consideration and calculations.

So, CAY means current academic year, CAY m1 means current academic year minus 1 which happens to be current assessment year. And CAY m2 means current academic year minus 2 current assessment year minus 1.

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Sub-Criterion 5.1 Student-Faculty Ratio (SFR) (20- T I and T II)

Evaluation Guidelines

- Marks to be given proportionally from a maximum of 20 to a minimum of 10 for average SFR between 15:1 to 25:1, and zero for average SFR higher than 25:1.
 - ≤ 15 - 20 Marks
 - ≤ 17 - 18 Marks
 - ≤ 19 - 16 Marks
 - ≤ 21 - 14 Marks
 - ≤ 23 - 12 Marks
 - ≤ 25 - 10 Marks
 - > 25 - 0 Marks
- 25:1 for the Accreditation of 3 years and 15:1 for the Accreditation of 6 years.

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Let us start with criterion 5.1 it is student faculty ratio and it is the same number of marks that are given for both tier 1 and tier 2 and the evaluation guidelines are fairly simple. That is, you have to compute the total number of students that you have. And how do you compute that? That we have talked about in criterion 4 and also it will be explained in detail when you look at the, the actual SAR document.

And then, what we are now looking for the ratio of faculty to ratio of students to faculty. And it varies, it needs to vary between or it can be more than 15 is to 1 to 25 is to 1. If for example, if the SFR is higher than 25 the department gets zero marks, in fact that will be one of the methods by which they will screen the what do you call before you submit a SAR, there are pre qualification criteria, it will come under that, earlier required student faculty ratio was 15 but now that has been reduced to 20.

Now, if you have 15 is to 1 ratio, then you get full 20 marks and if you have 17 is to 1 you get 18 marks. So, to that extent, if it is 16 is to 1 you get 19 marks, so it is a pro rata basis until 25 is to 1 ratio. Now, anything more than, more than 25 ratio you get zero marks. And there is a one rider for this. If you have 25 is to 1, let us say if the 25 is to 1 to anywhere up to 17 or 16 is to 1, then the accreditation is given only for three years.

However, well you perform on other counts, the accreditation is for three years. And if you want accreditation for six years, you need to have 15 is to 1 ratio of ratio of our SFR that needs to be remembered.

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Sub-Criterion 5.1 Exhibits/Context to be Observed/Assessed

- SFR is to be verified considering the faculty of the entire department.
- No. of Regular faculty calculation considering **Regular faculty definition;** Faculty appointment letters, time table, subject allocation file, salary statements.
- No. of students calculation as mentioned in the SAR (as per table under criterion 5.1)
- Faculty Qualification as per AICTE guidelines shall only be counted

Note: Minimum 75% should be Regular faculty and the remaining can be Contractual Faculty as per AICTE norms and standards.

Now, what are the exhibits that will be looked at by the visiting committee? The SFR is to be verified considering the faculty of the entire department. They may have multiple programs in that, but the entire department faculty will be counted. Number of regular faculty calculation considering regular faculty definition is faculty appointment letters, timetable, subject allocation file, salary statements, these are all the documents that will be looked at to by the visiting committee to determine the number of regular faculty.

And the number of students calculation is also mentioned in a SAR. There is a table and you just have to fill in the numbers as they exist. And as far as who is considered regular faculty, faculty qualification as per AICTE guidelines shall only be counted. If anyone deviates from that, AICTE guideline he or she will not be counted as faculty member and in additional thing here minimum 75 percent of the faculty should be regular faculty and the remaining can be contractual faculty as per AICTE and standards they need not be on a on a longer term appointment, but they can be contractual faculty.

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Sub-Criterion 5.1 Exhibits/Context to be Observed/Assessed (2)

- The contractual faculty (doing away with the terminology of visiting/adjunct faculty, whatsoever) who have taught for 2 consecutive semesters in the corresponding academic year on full time basis shall be considered for the purpose of calculation in the Student Faculty Ratio
- The faculty to be counted as regular faculty in the respective year, if the faculty has joined before or on 31st August of the same year and continued till 30th April of the subsequent year.
- The PhD faculty count requirement shall be calculated on the pro-rata basis – with at least 75% to be part of the regular faculty, and the remaining being part of the contractual faculty, if any.

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Once again there is also definition for contractual faculty. See the contractual faculty whether you use the word visiting/adjunct and so on. At least who have taught for two consecutive semesters in the corresponding academic year on full time basis shall be considered for the purpose of calculation in the student faculty ratio. If they are taught for two consecutive semesters in the corresponding academic year on full time basis they shall be considered as contract faculty.

The faculty to be counted as regular faculty in the respective year if the faculty has joined before or on 31st August of the same year and continued till 30th April of this subsequent year. So, this is also a requirement and this documentation will be verified by the visiting committee. The PhD faculty count requirement shall be calculated on the pro-rata basis with at least 75 percent to be part of regular faculty and the remaining being part of contractual faculty if any.

The PhD faculty count will be will be calculated based on this pro-rata basis depending on the actual number of faculty that you have.

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Sub-Criterion 5.1 Exhibits/Context to be Observed/Assessed (3)

- The available and required number of PhD. in the department would be calculated on the average basis for the previous two academic years including the current academic year.
- The available and required number of PhDs in the department shall be truncated to its nearest lower integer.
- If a member of regular or contractual faculty is designated as lecturer, even though holding an MTech degree, the same will not be counted against the faculty requirements.

And the available and required number of PhDs in the department would be calculated on the average basis for the previous two academic years, including the current academic year. Why we need to do all this a little detailed one is, so you may have faculty joining and leaving and so on. So on what basis will you count whether you are satisfying the requirements of number of PhDs that you require. And the small concession the available and required number of PhDs in the department shall be truncated to its nearest lower integer.

So you do not have to give a fractional number, but lower integer will be adequate. If a member of a regular or contractual faculty is designated as a lecturer, even though holding an M.Tech degree, the same will not be counted against the faculty requirements. So you cannot call somebody as a lecturer and count him as a regular faculty member, so one needs to keep that in mind.

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Sub-Criterion 5.2 Faculty Cadre Proportion (25 – Tier II and 20- Tier I)

Evaluation Guidelines

AF – Available Faculty RF – Required Faculty

Tier II

- Cadre Proportion Marks = $\left[\left(\frac{AF1}{RF1} \right) + \left(\frac{0.6 \times AF2}{RF2} \right) + \left(\frac{0.4 \times AF3}{RF3} \right) \right] \times 12.5$
If AF1 = AF2 = 0 then zero marks
- Maximum marks to be limited if it exceeds 25

Tier I

- Cadre Proportion Marks = $\left[\left(\frac{AF1}{RF1} \right) + \left(\frac{0.6 \times AF2}{RF2} \right) + \left(\frac{0.4 \times AF3}{RF3} \right) \right] \times 10$
If AF1 = AF2 = 0 then zero marks
Maximum marks to be limited if it exceeds 20

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Now there is faculty cadre proportion by and large you have available faculty and you have required faculty. So cadre proportion marks that is AF1 the number of available faculty at the professor level, that is AF1 and RF1 is required number of professors. So AF1 plus by RF1 and similarly, AF2 is related to associate professors.

So, a number of available associate professors divided by number of required associate professors multiplied by six. And similarly, you have point 4 into AF3, AF3 is available assistant professors and RF3 is required assistant professors using this formula and multiplying it by 12.5 will give you a max obviously, you get only a maximum of 25 marks.

That means, if you have access number of faculty for some reason or the other, whichever desirable from other points of view, but you will get only maximum 25 marks for this. But if AF1 and AF2 are equal to 0, that is you do not have professors or associate professors. You may designate some assistant professor as the head of the department, but that will not count for this. Then you get 0 marks for this and tier 1, the only difference is the multiplying factor namely instead of 12.5 now you multiply it by 10.

That means maximum number of marks that a tier 1 institution can get for this sub criterion 5.2 is only 20.

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Sub-Criterion 5.2 Exhibits/Context to be Observed/Assessed

- Faculty Qualification and experience required for cadre posts shall only be considered as per AICTE norms/guidelines
- Cadre wise No. of faculty available; Faculty qualification and experience and eligibility; Appointment/Promotion orders
- Cadre wise no. of faculty required as per AICTE guidelines (refer calculation in SAR)

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And once again, faculty qualification and experience required for cadre posts shall only be considered as per AICTE norms and guidelines, and cadre wise number of faculty available faculty qualification experience and eligibility and you look at the appointments and promotion orders. So the visiting committee will inspect all this documentation. So, the department has to make the files of all this available to the visiting committee and also cadre wise number of faculty required as per AICTE guidelines.

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Sub-Criterion 5.3. Faculty Qualification (25 – Tier II and 20- Tier I)

Evaluation Guidelines:

$$FQ = 2.5 \times [(10X + 4Y)/F] \text{ (Tier II)}$$

$$FQ = 2.0 \times [(10X + 4Y)/F] \text{ (Tier I)}$$

where X is no. of faculty with Ph.D.

Y is no. of faculty with M.Tech.

F is no. of faculty required to comply 1:20 Faculty Student ratio

Exhibits/Context to be Observed/Assessed:

- Documentary evidence – Faculty Qualification

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Now coming to sub criterion 5.3, faculty qualification once again they are the except marks are different for both tier 1 and tier 2 institution the method of calculation is the same like you have faculty qualification is equal to 2.5 multiplied by $10x$ plus $4y$. That is x is the number of faculty with PhDs and Y is the number of faculty with M.Techs and $10x$ plus $4y$ divided by f is the number of faculty required to comply 1 is to 20 faculty student ratio.

So you compute the F the number of faculty required and $10x$ plus $4y$ divided by f multiplied by 2.5 will give you a maximum of 25 marks. Whereas, for tier 1 institution, instead of 2.5 you multiply the same ratio by 2 . And once again, the documentary evidence will be looked at by the visiting committee with regard to faculty qualifications.

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Sub-Criterion 5.4 Faculty Retention (25 – Tier II, 10-Tier I)

Evaluation Guidelines:

- A. 90% of required Faculties retained during the period of assessment keeping CAYm2 as base year (25 – TII and 10 – TI)
- B. 75% of required Faculties retained during the period of assessment keeping CAYm2 as base year (20 – TII and 08 – TI)
- C. 60% of required Faculties retained during the period of assessment keeping CAYm2 as base year (15 – TII and 06 – TI)
- D. 50% of required Faculties retained during the period of assessment keeping CAYm2 as base year (10 – TII and 04 – TI)
- E. Otherwise (0)

Now, we come to another aspect which can be considered as important is the faculty retention. If faculty are coming and going regularly as it happens in some of the colleges, there is no continuity at all. If a faculty member stays for one semester and leaves and then the department has to make some temporary arrangements and asked some faculty member to teach a course with which he has no experience and so on.

So, faculty retention has dimension of continuity of learning and good quality learning if you keep making temporary arrangements, then obviously the learning by the students suffers. So, here there are 25 marks given for tier 2 and only 10 marks for tier 1. By an large what happens

is, there is a lot more movement in the case of tier 2 institutions than in tier 1 institution. So, what is considered if 90 percent of required faculty retained during the period of assessment, keeping CAY M2 current assessment academic year minus 2 as a base year if you calculate from that, if 95, 90 percent of the faculty are retained then you get 25 marks. In the case of tier 1 institution, you get 10 marks. Similarly, 75 percent of required faculty retained during the period of assessment, you get 20 marks in tier 2, 8 marks in tier 1.

And if 60 percent of required faculty are retained, then you get 15 marks for tier 2 and 6 marks for tier 1. 50 percent of required faculty are retain, then you get 10 marks for tier 2 and only 4 for tier 1, that means anything less than 50 percent of the faculty are getting retained. That means, you have a continuous inflow and outflow of faculty, then you get 0 marks.

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Sub-Criterion 5.4 Exhibits/Context to be Observed/Assessed: (Tier II and Tier I)

- Faculty date of joining; at least three month (July-April-May) salary statement for each of the assessment years.

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The documentation that will be seen by the visiting committee will be the faculty date of joining and also at least three months salary statement for each of the assessment year. Unfortunately, these are required to be inspected because some colleges will try to make adjustments or the documentation may not be accurate.

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Sub-Criterion 5.5 Innovations by the Faculty in Teaching and Learning (20 - Tier II and 10 – Tier I as per Cr. 5.6)

Evaluation Guidelines

- A. The work must be made available on Institute Website (4 – TII and 2-TI)
- B. The work must be available for peer review and critique (4 – TII and 2-TI)
- C. The work must be reproducible and developed further by other scholars (2 – TII and 2-TI)
- D. Statement of clear goals, use of appropriate methods, significance of results, effective presentation and reflective critique (10 – TII and 4-TI)

In addition to following these guidelines, the faculty should find a method of determining the impact of their innovation and record the same.

Now, here we come to sub criterion 5.5 it includes innovations by the faculty in teaching and learning but now the same topic namely innovations by the faculty. In tier 1, it is a criterion 5.6, though it is a criterion sub criterion is different, but the evaluation guidelines and exhibits they happen to remain the same. First thing is any innovation that you do, you cannot merely declare, say that I have experimented something during the current year and my students have learned well, you cannot make such a declaration.

Any work that you do must be made available on the institute website. If it is available on the website, you get 4 marks for tier 2 and 2 marks for tier 1. And also the work must be available for peer review and critic like when you make your material available on the website, there must be provision for any outsider is to peer review.

Somebody can comment on that and also critique, whatever that has been done. For example, any assumptions that are made or it could be in the form of some suggestions as well. But it should be when you create on the website there should be provision made for peer review and critique if you do that, you get 4 marks in tier 2 and 2 marks for tier 1.

The work must be reproducible and developed further by other scholars. That is, one cannot put kind of a combination of circumstances that are not reproducible something that can be reproducible by others and others can take on from there. So, if you if it is reproducible, then you

get 2 marks for tier 2 and 2 marks for tier 1. And how should we make this material available on the website?

Statement of clear goals, use of appropriate methods, significance of results, an effective presentation and reflective critique that is you critique your own thing that means at the end of it, what do you think that has happened? So you have, the teacher should be able to reflect on that. It may be a few sentences, but this document should be made available in this format on the on the website, you can add more elements to that, but at least these elements should be there.

For example, in addition to following these guidelines, the faculty should find a method of determining the impact of their innovation and regard the same, you have experimented with something? Some results have come but it really did it have an impact? And how are you counting that impact? Can you can you record the impact in some way or the other.

So if one can add that, you are adding a lot of value to whatever innovation that is being done by the faculty and what happens especially in tier 2 institution, the major activity of a teacher, let us say we call it 80 to 20, 80 percent of the time spent by the faculty member is related to teaching and learning. So you have and your laboratory is really your classroom, and you have a chance to keep innovating there.

And this is what is called also scholarship of teaching and learning. It is called SOTL. There is also and if you, every teacher in my opinion, should be interested in SOTL because you have a laboratory access to you. You do not require any other resource other than your classroom. And you are constantly interacting with your subjects or let us say your equipment or laboratory and to the extent you can keep innovating in that.

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Sub-Criterion 5.5 Exhibits/Context to be Observed/Assessed (Tier II and Cr. 5.6 of Tier I)

- A. Availability on Institute website; awareness among faculty and students of the department
- B. Self -explanatory
- C. Self -explanatory
- D. Innovations that contribute to the improvement of student learning, typically include use of ICT, instruction delivery, instructional methods, assessment, evaluation etc.

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Now what are the exhibits that visiting committee will look at? The availability and institute website, awareness among faculty and students of the department. That means, are the people aware of that such a web website exists, and then there is some material on that. And the rest of them are fairly self explanatory. And innovations that contribute to the improvement of student learning, typically include use of ICT somewhere, instruction delivery, instructional methods, assessment evaluation.

So one can be in any of these things are in all of them also, use of ICT instruction delivery, the choice of instructional method. The innovation can be in an assessment and also in evaluation.

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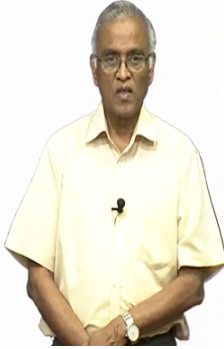
SC 5.5 Faculty competencies in correlation to Program Specific Criteria (10 – Tier I)

Evaluation Guidelines:

- A. Specialization
- B. Research Publications
- C. Course Developments
- D. Other relevant points

Department can create a matrix of competencies of its faculty members in format selected by the Institute.

Exhibits/Context to be Observed/Assessed:
Subjective evaluation by the visiting team



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Whereas, in the case of tier 1, the sub criterion 5.5 is related to faculty competencies in correlation to programs specific criteria or what do you call programs specific outcomes you can say. Now, the evaluation guidelines are, that means all the specializations that are required by the faculty to run your program, are they covered?

And are there any research publications in the area of the program specific criteria or any course developments that have taken place or any other relevant points if you are putting all of them together, and also we recruitment department should create or can create a matrix of competencies of its faculty members in a format selected by the institute.

What you do, you are you are preparing a kind of a picture of your own department faculty in terms of whether all the required competencies are covered or not adequately by your faculty. This will also become a good feedback to the management as well, when they want to hire new faculty are sometimes they may have to go to what do you call contract faculty. And this will be subjective evaluation by the visiting team.

And this carries only 10 marks for tier 1 institution. This sub criterion does not exist for tier 2 institution.

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SC 5.6 Faculty as participants in Faculty development /training activities/ STTPs (15-Tier II & Tier I Cr. 5.7)

Evaluation Guidelines

- For each year: Assessment = $3 \times \text{Sum}/0.5\text{RF}$
- Average assessment over last three years starting from CAYM1 (Marks limited to 15)

Exhibits/Context to be Observed/Assessed:

- Relevance of the training/development programme
- No. of days; No. of faculty

The Institute must seek a report from the faculty who participated in the FDPs and training programs on knowledge and methods they learnt and propose to use. The format of the report can be decided at the Institute level.

Now 5.6 faculty as participants in faculty development and training activities in STTPs because more than anything else, faculty have to continuously learn themselves as the subjects are evolving and instruction methods are growing when one needs to spend some time recharging oneself. And to the extent, there is some weightage given to teachers participating in this kind of faculty development programs and you have 15 marks for tier 2 and similarly 15 marks for tier 1, this particular criterion becomes 5.7 in the case of tier one institution and evaluation guidelines, there is obviously an upper limit for each year.

Assessment is equal to 3 into sum of number of days you can say that the teachers have participated in some of the programs could be two days, some of them could be five days So, you add the total number of faculty days that training activity has taken place divided by point 5 multiplied by RF required faculty. So, if you count that for each year, this is the number that you that you do.

As you can see, it the maximum can be only 3 and average assessment over last three years, starting from CAY M1. So the marks limited to is only 15. Even if your faculty have participate in a very large number of FDPs, you maximum number of marks you get is 15 in this and now exhibits include relevance of the training development program, number of days and number of faculty and it is also good idea for the institute to seek a report from the faculty who participated in the FDP or training programs on what is it that they have learned?

What is it that they have learned? And do they in what way do they propose to use anything that they have learned and in what format this report can be, can be decided by the institute level it may not be very elaborate one, they it can be one page, but at least there is a record, the management can take a look at at least the utility or something, the faculty member has really benefited by that.

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SC 5.7 Research and Development (Cr. 5.8 -Tier I)

Tier II – 30 Marks

5.7.1 Academic Research	10
5.7.2 Sponsored Research	05
5.7.3 Development Activities	10
5.7.4 Consultancy (From Industry)	05

Tier I – 75 Marks

5.8.1 Academic Research	20
5.8.2 Sponsored Research	20
5.8.3 Development Activities	15
5.8.4 Consultancy (From Industry)	20

Now, this is where the this is a really major one 5.7 this is 30 marks for tier 2 and 75 marks for tier 1 institution, but it becomes criterion 5.8 for tier 1. Now, you have academic research, sponsored research, development activities, consultancy from industry. So, you have four categories under the R and D. So, the marks distribution is like that as you can see, the in case of tier 1, these are these carry lot more marks here.

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SC 5.7.1 Academic Research (Cr. 5.8.1 for TI)

Evaluation Guidelines

A. Number of quality publications in refereed/SCI Journals, citations, Books/Book Chapters etc. (6 – TII and 15 –Tier I))

B. PhDs guided /PhDs awarded during the assessment period while working in the institute (4 –TII and 5 - TI)

Exhibits/Context to be Observed/Assessed:

- A. Quality of publications; publications copy
- B. Documentary evidence

Now, academic research is measured in number of quality publication in refereed journals, citations books and book chapters and so on. And you present there is no formula that is followed by looking at the list of publications and books or book chapters. When you mark it again 6 marks in tier 2 or 15 marks in tier 1. Similarly, PhDs guided are PhDs awarded during the assessment period while working in the institute.

Then it is 4 marks for tier 2 and 5 marks for tier 1. So, the visiting committee will look at quality of publications and or documentary evidence with regard to PhDs guided and PhDs awarded to the faculty themselves.

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SC 5.7.2 Sponsored Research (05-Tier II)

Evaluation Guidelines:

Funded research from outside; Cumulative during CAYm1, CAYm2 and CAYm3

- Amount > 20 Lakh – 5 Marks
- Amount \geq 16 Lakh and \leq 20 Lakh – 4 Marks
- Amount \geq 12 Lakh and < 16 Lakh – 3 Marks
- Amount \geq 8 Lakh and < 12 Lakh – 2 Marks
- Amount \geq 4 Lakh and < 8 Lakh – 1 Mark
- Amount < 4 Lakh – 0 Mark



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Sponsored research that is your seeking funding from outside sources. It could be any of the government agencies or any other private agencies who are willing to support you financially for some research over three years cumulative over three years the amount if it crosses 20 lakhs, then you get 5 marks in tier 2. And similarly, all the way if it is less than 4 lakhs you get 0 marks. Otherwise you get marks as pro rata basis as given in this particular list.

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SC 5.8.2 Sponsored Research (20 – Tier I)

Evaluation Guidelines:

Funded research from outside; Cumulative during CAYm1, CAYm2 and CAYm3

- Amount > 50 Lakh – 20 Marks,
- Amount >40 and < 50 Lakh – 15 Marks,
- Amount >30 and < 40 Lakh – 10 Marks,
- Amount >15 and < 30 Lakh – 5 Marks,
- Amount < 15 Lakh – 0 Marks



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Whereas, in terms of tier 1, you get 20 marks and that is given by like this if it is 50 lakhs you get 20 marks, 40 to 50 15 marks and so on. If it is less than 15 lakhs over three years, then it does not get counted.

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**SC 5.7.2 Exhibits/Context to be Observed/
Assessed (Tier II and 5.8.2 of Tier I)**

Documentary Evidence:

- Funding agency
- Amount
- Duration
- Research progress
- Outcome



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And how do you what is the documentary evidence one is seeking with this, the funding agency the amount duration, research progress, research progress possibly every project will have a project review committee, their reports and so on. And what are the final outcomes of this research, by way of publications reports are the results that have been obtained and so on.

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SC 5.7.3 Development Activities (Cr. 5.8.3 of Tier I)

Tier II – 10 Marks and Tier I – 15 Marks

Evaluation Guidelines

- A. Product Development
- B. Research laboratories
- C. Instructional materials
- D. Working models/charts/monograms etc.

The Department should make a list of the things developed and preferably create some posters.

Exhibits/Context to be Observed/Assessed:

- Self explanatory



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Similarly, development activities these include product development, research laboratories, instructional materials, working models, charts and monograms, these are these are counted as development activities. In tier 2, you get 10 marks and tier 1 you get 15 marks. And we also recommend that anything under this, department should make a list of the things developed and preferably create some kind of posters which can be exhibited to the visitors as well as to the visiting committee. So, otherwise it is self explanatory and I think every department should make some effort to do something and it is possible to get some marks out of this activity.

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SC 5.7.4 Consultancy (From Industry) (5 – Tier II)

Evaluation Guidelines

Consultancy; (Cumulative during CAYm1, CAYm2 and CAYm3)

- Amount > 10 Lakh – 5 Marks
- Amount ≥ 8 Lakh and ≤ 10 Lakh – 4 Marks
- Amount ≥ 6 Lakh and < 8 Lakh – 3 Marks
- Amount ≥ 4 Lakh and < 6 Lakh – 2 Marks
- Amount ≥ 2 Lakh and < 4 Lakh – 1 Mark
- Amount < 2 Lakh – 0 Mark



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And consultancy from industry 5 marks for tier 2 and once again over three year period, if the amount exceeds 10 lakhs, you get 5 marks and if it is less than 2 lakhs you get 0 marks, otherwise on pro rata basis.

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SC 5.8.4 Consultancy (From Industry) (20 – Tier I)

Evaluation Guidelines

Consultancy; Cumulative during CAYm1, CAYm2 and CAYm3

- Amount >10 Lakh – 20 Marks,
- Amount <10 and > 8 Lakh – 15 Marks,
- Amount < 8 and > 6 Lakh – 10 Marks,
- Amount < 6 and > 4 Lakh – 05 Marks,
- Amount < 4 and > 2 Lakh – 02 Marks,
- Amount < 2 Lakh – 0 Mark



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And similarly for tier 1 institution, they expect tier 1 institution to do little more of consultancy with the industry. And if it exceeds 10 lakhs, you get 20 marks and if it is less than 2 lakhs, you get 0 marks.

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SC 5.7.4 Exhibits/Context to be Observed/ Assessed (Tier II and Cr. 5.8.4 - Tier I)

Documentary Evidence:

- Funding agency
- Amount
- Duration
- Research progress
- Outcome



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And once again, how do you verify this? The funding agency, the amount receive duration, research progress and what are the outcomes and so on.

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SC 5.8. Faculty Performance Appraisal & Development System (FPADS)

Tier II – 30 Marks and Tier I – 10 Marks (Cr. 5.9)

Evaluation Guidelines

A. A well-defined performance appraisal and development system instituted for all the assessment years (10)

B. Its implementation and effectiveness (20)

Department should include the steps it has taken to develop the competencies of its faculty.

Exhibits/Context to be Observed/Assessed:

A. Notified performance appraisal and development system;
Appraisal Parameters; Awareness

B. Implementation, Transparency and Effectiveness

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Now come the faculty performance and appraisal and development system. Every institute should have FPADS as we call it, that means the performance of the teacher should be periodically appraised. And also there should be a process in place for continuous development of the teacher. So that is what it is and in Tier 2 30 marks and tier 1 only 10 marks right now,

evaluation guidelines, that means you have well defined performance appraisal and development system instituted for all the assessment tiers is it operating, is there a system that has been a document that is that actually describes how performance of a teacher is appraised.

And also, its implementation the effectiveness there can be a document but in in practice, you do not really implement it then you do not get marks if the for its implementation and effectiveness you carry 20 marks in case of tier 1, tier 2 institution. And departments should also include steps it has taken to develop the competencies of the faculty because it is not only just appraisal but development also, is there a mechanism that you have by looking at what the teacher is doing, somebody may be doing very well but then you encourage him to further grow by make making certain opportunities available to him.

And the exhibits are notified performance appraisal and development system and appraisal parameters, awareness, and its implementation transparency and effectiveness. So, all these will be inspected by the visiting committee before they award the marks.

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SC 5.9 Visiting/Adjunct/ Emeritus Faculty etc. (10 - Tier II)

Tier II - 10 Marks and Tier I -10 Marks (Cr. 5.10)

Evaluation Guidelines

- Provision of Visiting /Adjunct/Emeritus faculty etc.(1)
- Minimum **50** hours per year interaction
(per year to obtain three marks : $3 \times 3 = 9$)

Department should prepare a report on the activities and contributions made by these faculty.

Exhibits/Context to be Observed/Assessed:

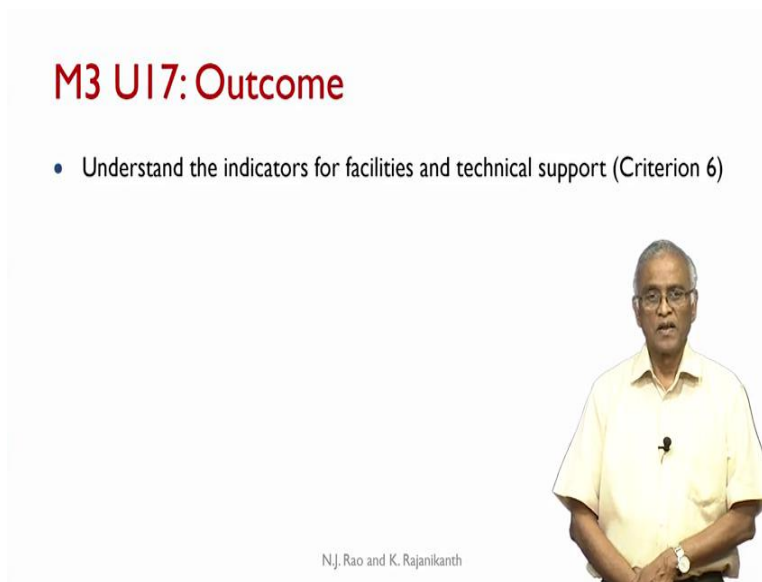
- Documentary evidence

And you have the 5.9 is related to visiting Adjunct and Emeritus faculty. See, they are different from contract faculty. That means you are you are getting somebody some expert to spend some time with you, who can come and either give a course are can interact with the faculty or can interact with the students. So, you may have, but who will be considered these faculty.

So, first of all there should be provision of visiting Adjunct and Emeritus faculty there should be provision for it. So, a document under what conditions they have to fulfill to qualify under this just 1 mark presence of such a document and these people should have should give 50 hours per year interaction.

So per year to obtain 3 marks, and over three years, you can have maximum 9 marks. If you have, even if you have large number of these visiting faculty, still the maximum you will get is 9 marks for this. So it becomes 10 for this and department should prepare a report on the activities and contributions made by this faculty. They do not necessarily have to give a course they can work, let us say when the students are doing project a well defined as per well defined schedule, they can interact with the students to improve the quality of projects as well.

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M3 UI7: Outcome

- Understand the indicators for facilities and technical support (Criterion 6)

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So but you have to create document documentary evidence of what has happened. And so that covers the 10 sub criteria for tier 1 institution and 9 sub criteria and tier 2 institution. And as you can see, this particular criterion is the most crucial in any in any engineering college because it is a faculty who plays a key role in facilitating good learning. And in the next unit, we will try to understand the indicators for regarding facilities and technical support offered, which constitutes criterion 6. Thank you very much.

