

NBA Accreditation and Teaching - Learning in Engineering (NATE)
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Lecture No 02
NBA Accreditation

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Greetings and welcome to module 1, unit 2 of the course NATE, NBA Accreditation and Teaching Learning in Engineering.

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**MIU2 NBA Accreditation of
Engineering Programs**

N J Rao and K Rajanikanth

Recap

- Understood the nature and outcomes of the course NATE. Teachers of engineering colleges need to understand the requirements of NBA accreditation and the role they need to play. Teachers are required to conduct teaching-learning activities from the perspective of outcome based education.

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The in the earlier unit, we understood the nature and outcomes of the course of NATE. The main reason why we are interested in this course is teachers of engineering colleges need to understand the requirements of NBA accreditation. And their role in that process in the process of preparing for accreditation because the new NBA accreditation process requires all faculty concerned with that program to participate in one way or the other.

And also teachers are required to conduct teaching learning activities from the perspective outcome based education. So, the purpose of this course is, teachers to understand the processes associated with NBA accreditation and to conduct their teaching learning activities from the perspective of outcome based education that is the purpose of this course.

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MIU2 Outcome

- Understand the nature of NBA Accreditation process, and the conditions under which accreditation is awarded to an engineering program.

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In this unit, we attempt to understand the nature of accreditation process, NBA accreditation process and the conditions under which accreditation is awarded to an engineering program. At this point, we will look at the entire process a bit superficially, so that we get the framework in mind and then will start working on the details as we go along. So, in this unit do not expect to do not expect answers for all the questions that you have on the NBA accreditation process.

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Engineering Programs in India

- Are offered as per the regulations of All India Council for Technical Education (AICTE)
- Are offered by Tier 1 (Academically Autonomous) and Tier 2 (Academically Non-autonomous) Institutions.
- At present more than 90% of engineering colleges are academically non-autonomous, i.e., Tier 2 institutions.

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The slide features a video inset of a man in a light blue striped shirt speaking. The text is in a clean, sans-serif font, with the title in red and the bullet points in blue.

Now, first thing is engineering programs in India have to be offered by institutions which are permitted to offer by all India Council for Technical Education. That means everything college or institution offering engineering programs on a standalone basis, not as a part of a university as of now. They have to get permission from AICTE, AICTE gives permission. When you, when the institution fulfill certain requirements as specified by AICTE, if they do not fulfill AICTE will not permit.

And these are offered by two types of institution as NBA recognizes. One is called Tier 1, which is academically autonomous. Tier 2 is academically non-autonomous. There are two types of institutions. The academically autonomous institution can also, can be part of a university, either a private university or deemed to be University and that means they are academically autonomous means they are responsible for their curriculum. They are responsible for conducting the examinations and responsible for declaring the results.

If it is university, they do not have to go anywhere else. But when academically autonomous institution which is affiliated to another university, then the University awards the degree but

they are expected to be academically autonomous. Whereas, tier 2 institutions, they are academically non-autonomous, and they are certainly affiliated to a university. Non-autonomous means all the academic act, the major academic activities other than classroom instruction, and internal evaluation. There is a curriculum design and conducting of examinations and declaring the results are all done centrally by the university.

At present, more than ninety percent of engineering colleges are academically non-autonomous that is tier 2 institution, while people have been complaining about it, but somehow converting non-autonomous institution to autonomous institution has been going on at a very very slow pace.

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National Board of Accreditation (NBA)

- Established in the year 1994 under Section 10 (u) of AICTE Act.
- The NBA became Autonomous in January 2010.
- The Memorandum of Association and Rules of the NBA were amended in April 2013 to make it administratively as well as financially independent of AICTE.
- India became a permanent member of the Washington Accord in 2014.
- The NBA, since 2015, requires that engineering programs are conducted in the framework of Outcome Based Education.

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Now, let us look at a little bit of, we are directly concerned with National Board of Accreditation. We need to understand a little history of this. The NBA was established in the year 1994. Under the section 10 (u) of AICTE act, when it was established, it was an integral part of AICTE. That means, the head of NBA is directly come under the chairman of AICTE. And it became NBA became autonomous in January 2010. That means almost 16 years after its inception, it became autonomous but still it was operating out of NBA, possibly with the budget coming from AICTE budget.

Then in 2013, a memorandum of association and rules of the NBA were amended to make it administratively as well as financially independent of AICTE. What it means? It has more than a new building. They are responsible financially for themselves, and also they administer themselves. However, any institution like that will have several committees. The

committee, the one that governing board will have members or the chairman of AICTE as ex official member in that, so it is linked to AICTE, but only as it respect to policies.

But whereas, day to day activities of NBA are done by, are not supervised by AICTE directly. And then India became a permanent member signatory to the Washington Accord will presently talk about Washington Accord in 2014. And then, since 2015 NBA requires that engineering programs are conducted in the framework of outcome based education. This is a direct consequence of becoming a signatory to the Washington Accord.

Now, becoming a signatory to the Washington Accord has a long history. We need not follow that. We right now we do not have with concerned about it. But in 2014, we became a signatory.

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Washington Accord

- It recognizes the substantial equivalence of programs accredited by signatory countries.
- It recommends that graduates of programs accredited by any of the signatory bodies be recognized by the other bodies as having met the academic requirements for entry to the practice of engineering

Having signed the Washington Accord, it brought the new responsibilities to the NBA. The accreditation processes had to be brought in alignment with those recommended by the Washington Accord. This was initially done for the sorry the NBA accreditation process was defined initially for tier 2 institution and announced in 2015 because they constitute the dominant portion of engineering institutions. It was first announced in June 2015. The accreditation process were defined for tier 1 institutions in 2016.

And Washington Accord is an international accreditation agreement for undergraduate professional engineering, academic degrees between the bodies responsible for a accreditation in its signatory countries and regions. It was established in 1989 or in the full signatories, signatories as of 2018 include Australia, Canada, China, Hong Kong, India,

Ireland, Japan, Korea, Malaysia, New Zealand, Pakistan, Peru, Philippines, Russia, Singapore, South Africa, Sri Lanka, Taiwan, Turkey, the United Kingdom and the United States.

So, these eighteen countries are signatories to the Washington Accord. The Washington Accord covers only the undergraduate engineering degrees under the outcome based education approach. Only qualification awarded after the signatory country or the region became part of the Washington Accord are recognized. That means, outside these eighteen countries, if somebody has awarded a degree engineering degree, the other countries may or may not recognize it as equivalent to engineering program.

The Washington Accord recognizes that there is a substantial equivalence of programs accredited by those signatories. It is roughly equivalent to this first of all, it is a four year program, so all the signatory countries will have four year program. They are offered in two semesters a year. And they have certain features which broadly command it is not exactly something is imposed. But in the spirit of whatever criteria they have Washington Accord has written down. The countries are expected to be conducting their programs.

Periodically, Washington Accord committee will send a group to kind of inspect how the accreditation process in the signatory countries are happening. They will only come and observe, they will not interfere with the accreditation process that is going on. And they just report back to the head office of Washington Accord. It is called Washington Accord because the, this is signed, accord is signed in Washington.

There are other accords like that which, which are which were signed in Sydney and another accord signed in Dublin and so on. Graduates accredited of accredited programs in any of the signatory countries are recognized by the other signatory countries as having met the academic requirements for the entry to the practice of engineering. As of now, a Washington Accord recognizes the engineering graduates from tier 1 institutions only, strictly speaking because all the autonomy of the academic process will have to be with the institute.

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Accreditation

- Accreditation is a process of quality assurance and improvement, whereby a program in an approved Institution is critically appraised to verify that the Institution or the program continues to meet and/or exceed the Norms and Standards prescribed by the regulator from time to time.
- It is a kind of recognition which indicates that a program or Institution fulfills certain standards.
- Programs, and not Educational Institutions, are considered for accreditation by NBA.

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Now, let us look at what is this accreditation process? Accreditation is a process of quality assurance and improvement, whereby a program in an approved institution is critically appraised to verify that the institution or program continues to meet under exceed norms and standards prescribed by the regulator from time to time. That is a very formal sentence. What it means is? An engineering college or an institution offering engineering program is a social institution. And it has several stakeholders, any institution like that will have several stakeholders.

You have to periodically reassure the stakeholders that what you are doing is of acceptable quality. When somebody is a credited, it does not mean that it has achieved the highest standard or anything. You are only achieved the minimum standard that is prescribed by the accrediting agency. And these standards will keep changing from time to time, but of course after the due consultations with the whole community. So, when an institution is accredited, it is a kind of recognition which indicates that program or institution fulfills certain standards actually one can replace certain by the minimum standards.

Normally people do not wish to use word minimum standard, but it is strictly it is minimum standards that you need to fulfill. What are those minimum standards we will presently see for each institution. And it is the programs, here program would mean any four year engineering program is a program like BE in Mechanical Engineering, BE in Computer Science is a program and it is programs and not educational institutions are considered for accreditation by NBA.

For example, in a given institution, one department may get accreditation, another program in that institution may not get accreditation for a variety of reasons. One of the reasons is you may not be getting enough number of students into the program or there may not be adequate faculty in that particular department and so on. So such things can happen. So, it is a program that is considered for accreditation by NBA.

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Purpose of Accreditation is

- Not to find faults with the institution but to assess the status-ante of the performance
- Not to denigrate the working style of the institution and its programs but to provide feedback on their strengths and weaknesses
- Not to demarcate the boundaries of quality but to offer a sensitizing process for continuous improvement in quality provisions
- Not to select only institutions of national excellence but to provide benchmarks of excellence and identification of good practices

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Now, we should also look at what accreditation is not. People used to have a still some institutions have that the committee that comes for accreditation is only there to find faults with what is happening there? So, the purpose of accreditation is please note not to find faults with the institution, but to assess the status ante of the performance. It is only trying to say this is where you are trying to comment on, this is where you are. And it is not to denigrate the working style of the institution and its programs but to provide feedback on their strengths and weaknesses.

So, a visiting committee actually, will should not and does not comment on the working style of the institution. Each institution is different, different people are managing, so, the working styles can be different. And the purpose is also not to demarcate the boundaries of quality, but to offer a sensitizing process for continuous improvement in quality provision. So, that is the one that we will see, how do you plan for continuous improvement in the quality of learning? And it is also not the purpose, purpose is not to select only institution of national excellence, but to provide benchmarks of excellence, and identification of good practices. When the committee comes, they find some good practices and institution. They can bring it to the

attention of the NBA headquarters, and NBA can bring it to the attention of all the institutions. So, that that is also a process for setting benchmarks as well.

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Benefits of Accreditation

- Facilitates continuous Quality Improvement
- Demonstrates accountability to the public
- Improves staff morale
- Recognizes the achievements/innovations
- Facilitates information sharing
- Priority in getting financial assistance
- Helps the Institution to know its strengths, weaknesses and opportunities
- Initiates Institutions into innovative and modern methods of pedagogy
- Promotes intra and inter-Institutional interactions

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What are the benefits of accreditation? If I do not get accredited what happens? That choice may not be there anymore. But if you are getting accredited, first accreditation requires, several processes to be put in place. These processes serve as a reference for, for most of the academic activities and they facilitate once you have a process, it will also tell you how to then we ourselves will get an idea how to improve that process.

So, they facilitate continuous quality improvement. When an institute gets the accreditation from the NBA, it demonstrates accountability to the public. As I already said, it demonstrates to the stakeholders that they are doing a an acceptable job of teaching and learning. It also improves the staff morale when somebody says you are doing well, the entire staff both faculty and support staff and administrative staff feel very happy that somebody has recognized them.

It is also a recognition of achievements and innovations. As NBA requires extensive documents, particularly in electronic form, it greatly facilitates information sharing, with all the concern both in and outside the college which is a great way of learning from one another. If they put these documents relevant documents on their website, other faculty from other institutions can look at it and learn from that. And several funding agencies will also consider proposals only from accredited institutions.

Periodic accreditation helps the institution know its strengths, weaknesses and opportunities. And the department based on the visiting committee report can initiate some innovative and modern methods of pedagogy. Because once you get into the mode of outcome based education and that is where various pedagogical methods can be brought into the regular teaching learning activities and also accreditation promotes intra and inter institutional interactions. That is what the benefits of accreditation, so it is though it is a bit of documentation sometimes people feel as overload, there are several advantages and once you get into the habit of properly documenting subsequently it does not become the kind of burden.

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What are Outcomes?

- An outcome of an education is what the student should be able to do at the end of a program/ course/ instructional unit.
- Outcome-based education is an approach to education in which decisions about the curriculum are driven by the exit learning outcomes that the students should demonstrate at the end of the program/ course.
- Outcomes provide the basis for an effective interaction among stakeholders.

And now we come to find out what are really the outcomes? Because we are talking of outcome based education, what are the outcomes? An outcome of an education is what the student should be able to do at the end of a program, a course or an instructional unit. It is a very simple one. Now, outcome is nothing but is stated from the student perspective, from the student point of view.

That means we do not say what the teacher should teach in a particular unit of instruction or in a particular course. It is what the student should be able to do as a consequence of what do you call attending the classes are teaching learning process. So, the outcome of education is measured in terms of the, what the student is able to do? So, outcome based education simply is an approach to education in which decisions about the curriculum are driven by the exit learning outcomes that the students should demonstrate at the end of a program.

That means, your curriculum now is defined in terms of exit learning outcomes. If you take a four year program, first thing that you have to do in outcome based education, you have to define what kinds of things the student should be able to do at the end of four years? You have to start from there. We will, we will see that how exactly that is tackled and then in order to attain this, what kind of courses should be offered, and what should be the outcomes of those courses or whatever other core activities that the student has to perform will also come as a consequence of identifying the outcomes at the end of the program.

And when you write the outcomes at various levels of the program, they will also make a wonderful platform for interacting with these stakeholders. If we want to discuss with industry, instead of vaguely talking on some ill-defined aspects of that you can put on a piece of paper, these are the program level outcomes and these are the course level outcomes. And that could form the basis for one to one interaction with industry.

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Levels of Outcomes

- **Program Educational Objectives:** PEOs are broad statements that describe the career and professional accomplishments in four to five years after graduation that the program is preparing graduates to achieve.
- **Program Outcomes:** POs are statements that describe what the students graduating from engineering programs should be able to do at the time of graduation.
- **Program Specific Outcomes:** PSOs are statements that describe what the graduates of a specific engineering program should be able to do at the time of graduation.
- **Course Outcomes:** COs are statements that describe what students should be able to do at the end of a course

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Having talked about outcomes, now let us talk about what are the levels of outcomes. Because it is not like one, one statement that you write that this is the outcome of the program, there are actually three levels of outcomes. One, first one is program educational objectives. What are they? PEOs as we call them are broad statements that describe the career and professional accomplishments in four to five years after graduation, that the program is preparing the graduates to achieve.

For example, the purpose is like this, if I am run, if I am offering a program in BE in Civil Engineering. I would like to see if after graduation, I would like to go and find out where my

alumni, where are they working, and what kind of jobs are they doing? If that is where, you right I expect my graduates after four or five years to be doing certain types of activities. If they are not doing that, then there is no link between what we teach and what the students are doing?

If every one of the Civil Engineers graduates or going into their management or into some IT program, a software job, which has nothing to do with Civil Engineering, then the program has no meaning at all. Yes, they get a degree, they get the job also, but the entire program has no meaning to the graduates. And so we write program educational objectives, a few of them some 2 to 5 we can write, and we keep observing what is happening to our graduates will come to that much later in great detail.

And we how do we, what is the role of PEOs and how to write them? And we look at samples and all that. Then comes at the program level, you have two, one is set of program outcomes and another is a set of program specific outcomes. Program outcomes POs are statements that describe what the students graduating from engineering program should be able to do at the time of graduation. As you can see, we are, we are not talking about a specific engineering program. So, these program outcomes are common to graduates of all the, all the programs that means, it is discipline nonspecific outcome. These can also be called so called professional outcomes.

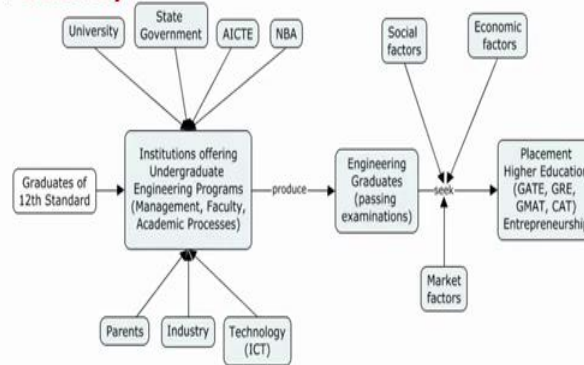
That means, every engineer will have to do certain things. It is not as if only certain type of engineers have to do, so but who defines this program outcomes? These are defined by the National Board of Accreditation itself. So, at the, at any program level, the board of studies does not have any choice with regard to choosing POs. So, the boards of studies will have to design their program to ensure that these program outcomes are attained.

Now, programs specific outcomes are discipline specific. And they are statements that described what the graduates of a specific engineering program should be able to do at the time of graduation. These are generally about 2 to 4 that you write, which describes exactly what the way you are, if they are Electrical Engineers, what at the time of graduation, what kind of Electrical Engineering related activities they should be able to do?

Then come the courts outcomes COs are statements that describe what the student should be able to do at the, at the end of the course? So, you have three levels of outcomes and we will be talking about them much more in detail later.

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Engineering Education as practiced until recently



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Now, coming to this engineering education as practiced until recently there is recently means until 2015 or even by institutions which have not yet gone for accreditation, if you look at the graduates of 12th standard enter into the engineering program. Now, the when we say institutions offering undergraduate engineering programs, institution is defined by the management, faculty and certain academic processes. And many of them are influenced by the university it is part of state government, AICTE and NBA and also parents, industry and technology that you use all of them will influence the activities of the this institution.

And they produce engineering graduates, only passing certain examinations as conducted by the, by the program, either by the University in a centralized manner or by autonomies institution. And what do they do these graduates? Seek either placement or go to higher education and a small number will be, will become entrepreneurs. But this process of seeking this is greatly influenced by market factors, economic factors and social factors.

And for these factors the college cannot be responsible, it has to generally keep track of this and take some initiatives, so that the graduates of engineering programs do get placement or go for higher education. But now, this has changed in the OBE framework, what are the changes that are taking, that have taken place? This part is the same 12th standard graduates will come here and they produce as influenced by these agencies.

Engineering graduates with defined abilities, these abilities are defined as POs, PSOs and COs which we have just now described. And they seek placement it is the same which are influenced by social factors, economic factors, and market factors as well. And now these

engineering graduates are involved after four years in activities identified by program educational objectives. So, we keep monitoring our alumni what they are doing to make sure that whatever we teach is of relevance to the carriers of their graduates.

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Self Assessment Report (SAR)

- SAR is compilation of such data and information pertaining to a given program for its assessment (identifying strengths and weaknesses) vis-à-vis accomplishment of NBA defined POs and PSOs by the program.
- SAR has two parts
- Part -I seeks Institutional /Departmental information


When we seek NBA accreditation, how does the college communicate with the, what kind of information does the college provide to the NBA? They prepare what is called a self-assessment report, which will be quite comprehensive. And based on that, there are several follow up activities take place. But what is this a SAR? SAR is a compilation of such data and information pertaining to a given program for assessment identifying your own strengths and weaknesses, vis-a-vis accomplishment of NBA defined POs and PSOs by the program.

So, that is a record of to what extent you have been able to attain your POs and PSOs. And now SAR has two parts. Part one, seeks institutional and departmental information is only just what is the name of this, what is the name of the department and so on, what kind of programs your department runs, that is pure institutional departmental information, which is just have to ask for provide whatever that has been asked for.

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Self Assessment Report (SAR) (2)

- Part –II seeks information on ten criteria and Program Educational Objectives, Program (Specific) Outcomes, Programme Curriculum, Students' Performance, Faculty Contributions, Facilities and Technical Support, Academic Support Units and Teaching-Learning Process, Governance, Institutional Support and Financial Resources, Continuous Improvement in Attainment of Outcomes
- NBA reconfirms or differs from the assessment of the institution using a mechanism of peer review, in its evaluation report.



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Then part two, seeks information on ten criteria. These include program educational objectives, program outcomes in specific outcomes, program curriculum, students' performance, faculty contributions, facilities and technical support, academic support units, teaching learning process, governance, institutional support, financial resources, continuous improvement in attainment of outcomes. We will see each one of them in detail at a later stage.

Now, what happens having written the report, NBA through a committee that is specially constituted and sent to your institute will come and re, reconfirm or differs from the assessment of the institution using a mechanism of peer review in its evaluation report that is what SAR is all about.

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SAR Criteria

Criteria No.	Criteria	Tier I Marks	Tier II Marks
Program Level Criteria			
1.	Vision, Mission and Program Educational Objectives	50	60
2.	Program Curriculum and Teaching-Learning Processes	100	120
3.	Program Outcomes and Course Outcomes	175	120
4.	Students' Performance	100	150
5.	Faculty Information and Contributions	200	200
6.	Facilities and Technical Support	80	80
7.	Continuous Improvement	75	50
Institute Level Criteria			
8.	First Year Academics	50	50
9.	Student Support Systems	50	50
10.	Governance, Institutional Support, and Financial Resources	120	120
	Total	1000	1000

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Now, these are the criteria, here there are some differences between tier 1 and tier 2 institutions. And like for example, vision, mission and program educational objectives. Actually this marking system is meant for first time accreditation that means after 2015 or 2016 when an institution is going for the first time for accreditation these marks are applicable. As we are still in the early period after the 2016 when second time an institution goes for that, this marking system will slightly differ. Please note that.

And so, the marks are distributed along all these criteria. We will not go through the specific numbers now, you have program level criteria. There are seven of them. And there are institute level criteria. There are three of them because any program is dependent on all these three. So, there is something like you if you have about 220 marks out of 1000 are institution level criteria. But mind you, if a program is not accredited they would not blame the first, the department or faculty responsible for first year academics, they will only blame the department.

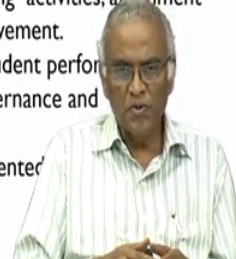
So, faculty of the department have to be concerned with these activities as well. You may or may not have much say with regard to this governance, institutional support and financials. Now, if you look at as you can see, depending on what NBA considers what is (imp) more important than the others marks are accordingly adjusted, we will come to that later. So, these are the ten criteria of NBA.

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Nature of SAR Criteria

- The criteria are concerned with
 - Academic Processes
 - Information on the status of the Institute
- Criteria 1, 2, 3, 7 and 8 are related to Vision and Missions of Institute and Department, design of curriculum, teaching-learning activities, attainment of outcomes and processes for continuous improvement.
- Criteria 4, 5, 6, 9 and 10 are related to data on student performance, faculty, facilities, student support systems and governance and management
- Information regarding all the criteria is to be presented for graduated batches

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SAR Criteria

Criteria No.	Criteria	Tier I Marks	Tier II Marks
Program Level Criteria			
1.	Vision, Mission and Program Educational Objectives	50	60
2.	Program Curriculum and Teaching-Learning Processes	100	120
3.	Program Outcomes and Course Outcomes	175	120
4.	Students' Performance	100	150
5.	Faculty Information and Contributions	200	200
6.	Facilities and Technical Support	80	
7.	Continuous Improvement	75	
Institute Level Criteria			
8.	First Year Academics	50	
9.	Student Support Systems	50	
10.	Governance, Institutional Support, and Financial Resources	120	
	Total		

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Now, let us briefly spend a little time on the nature of these criteria. The criteria can be broadly classified into academic processes and information on the status of the institute. So, the criteria 1, 2, 3, 7 and 8 are related to vision and mission of the institute and department, design of curriculum, teaching learning activities, attainment of outcomes and the process for continuous improvement.

So, take a look at 1, 2, 3 and 7 and 8. These are the academic processes that are concerned. And criteria 4, 5, 6, 9 and 10 are related to data on student performance. You have to collect information after something is done as well as on the how many faculty you have, what are their qualifications, what is their experience and the facilities you have, what student support systems you have, and what is the nature of governance and management in the institution?

They are all part of as you can see, these are different set of criteria. And the SAR has to present all this information to be presented over two graduated matches batches, for two graduated batches, exactly which you have to present that we will see later. But the data will have to be collected over five years. And that information has to be integrated and certain conclusions have to be drawn based on that data.

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Award of Accreditation (Tier I)

For each criterion:

- Y (No Concern): $\geq 75\%$
- C (Concern): $<75\% \ \& \ \geq 60\%$
- W (Weakness): $<60\% \ \& \ \geq 40\%$
- D (Deficiency): $<40\%$

Full Accreditation for 6 years

- Without Concerns (Y) ≥ 7 ; Concerns (C) ≤ 3 ; Weakness (W) = 0; Deficiency (D) = 0.
- In addition, at least 30% of the required Faculty shall be Ph. D. and also the enrolment of students shall be $\geq 75\%$.

Now, these are numbers only. How do you award accreditation? In the tier 1 institution is different than tier 2 institution. Here for each criterion, you have four categories Y, C, W, D. Y means no concern, C means there is some concern, W means there is weakness and D means there is a deficiency. So, there are certain marks for each criterion, one needs to earn and if it is greater than or equal to 75 percent then there is no concern, here nobody is expecting 100 percent. And if it is between 60 and 75, it is area of concern. And if it is weakness means 40 to 60 percent and deficiency means less than 60 percent.

Now, a institution will get full accreditation for six years. If number of Y's is greater than seven that means, out of 10 criteria with regard to 7 criteria, you got more than 75 percent marks. And concerns are less than or equal to 3, weaknesses should be 0, deficiency should be 0. In addition, at least 30 percent of the required faculty shall be PhDs. And also the enrollment of students shall be 75 percent, more than 75 percent. If all these conditions are satisfied, that program will get full accreditation for a period of six years.

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Award of Accreditation (Tier I) (2)

Full Accreditation of the program may be considered after three months

- Without Concerns (Y) ≥ 7 ; Concerns (C) ≤ 2 ; Weakness (W) ≤ 2 ; Deficiency (D) = 0.
- In addition, the Criterion 5: Faculty Information and Contribution should not have any Weakness (W).

Provisional Accreditation for 3 years

- Without Concern (Y) ≥ 4 (has full compliance). Deficiency (D) ≤ 2 .
- In addition, the Criterion 5: Faculty Information and Contribution should not have Deficiency (D) and at least two Professors or one Professor and one Associate Professor available in the respective department.

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Sometimes, you may be falling short a little bit. So, after the peer committee visit, they give you a short period like three months if there are small things that can be corrected. So, without concern still greater than 7, concerns less than 2, weakness is less than 2 deficiency is 0. In addition, the criterion 7 faculty information contribution cannot have any weakness. Under 2 or less weaknesses, it cannot be criterion 5.

Then provisional accreditation for 3 years without concern greater than 4, deficiency less than 2. In addition, the criterion 5 it cannot have any deficiency and it should have, department should have at least two professors, or one professor and one Associate Professor, available in the respective department. You cannot call anybody as a professor and Associate Professor as per the specifications of AICTE.

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Award of Accreditation (Tier 1) (3)

No Accreditation

- Deficiency (D) >2 OR Without Concern (Y) < 4 OR Deficiency (D) in Criterion 5: Faculty Information and Contribution and non-availability of two Professors or one Professor and one Associate Professor in the respective department.

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As you can see, if D is greater than 2, Y is less than 4, you cannot get accreditation and also followed by any of these, if any of these conditions are met or you fall into that you have no accreditation.

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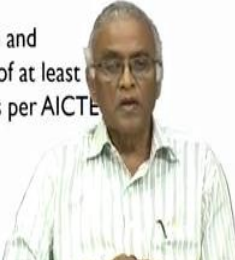
Award of Accreditation (Tier 2)

Full Accreditation for 6 Years:

- 750 out of 1000 points
- minimum of 60% points in Criteria 4, 5 and 6
- 30 % of the required faculty shall be Ph. D. holders

Provisional Accreditation for 3 Years:

- Minimum 600 out of 1000 points
- with minimum 40% marks in Faculty Information and Contributions (Criterion 5) and also availability of at least (1) Professor or one (1) Associate Professor (As per AICTE Qualification) in the respective Department

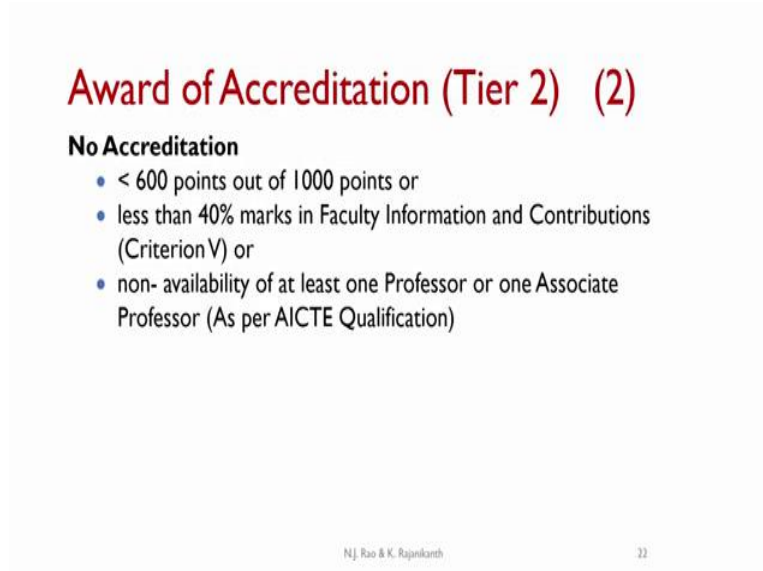


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Now, tier 2 institutions are slightly different because quite a, quite many factors related to running of the institution are centrally control elsewhere. So, you go with the marks here, full accreditation is 750 out of 1000 points, minimum 60 percent points in criteria 4, 5 and 6, 30 percent of the required faculty shall be PhD holders. Provisional accreditation for 3 years, minimum 600 out of 1000 points with minimum 40 percent marks for the faculty information

and contributions and also the availability of at least one professor or one Associate Professor as per AICTE qualification in the respective department.

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Award of Accreditation (Tier 2) (2)

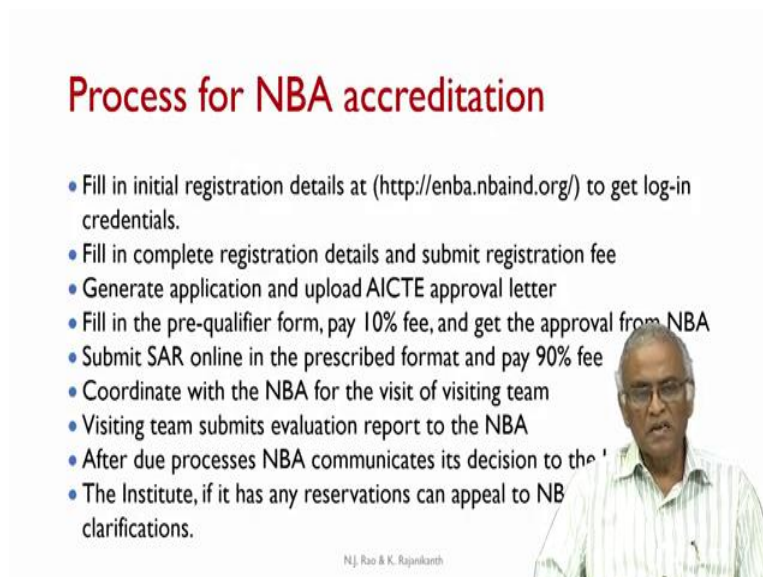
No Accreditation

- < 600 points out of 1000 points or
- less than 40% marks in Faculty Information and Contributions (Criterion V) or
- non-availability of at least one Professor or one Associate Professor (As per AICTE Qualification)

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Now, accreditation is obviously less than 600 points, you do not or again if it is 40 percent marks less than in the faculty criterion 5 you will not get accreditation. And non-availability of at least one professor or one Associate Professor also you will not get in a tier 2 institution accreditation.


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Process for NBA accreditation

- Fill in initial registration details at (<http://enba.nbaind.org/>) to get log-in credentials.
- Fill in complete registration details and submit registration fee
- Generate application and upload AICTE approval letter
- Fill in the pre-qualifier form, pay 10% fee, and get the approval from NBA
- Submit SAR online in the prescribed format and pay 90% fee
- Coordinate with the NBA for the visit of visiting team
- Visiting team submits evaluation report to the NBA
- After due processes NBA communicates its decision to the
- The Institute, if it has any reservations can appeal to NB clarifications.

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Generally, these criteria they also will we will see as a process there is some eligibility criteria. If you fulfill the eligibility criteria you are unlikely to fall into those things. Now, it is

a brief description of what is a process for NBA accreditation. Filling initial registration details at the indicated website to get login credentials, fill in a complete registration details and submit registration fee, which is a small fee, which is a college has to pay, generate application and upload AICTE approval letter. There is an AICTE approval letter that you have to get before you apply for NBA accreditation that approval letter will have to be uploaded.

Filling the pre qualifier form, pay 10 percent fee and get the approval from NBA. If pre qualifier form which is separately given, we will talk about that later. If it is, they will verify that and then NBA says, now you can submit your SAR. If you do not fulfill that you are only losing the 10 percent fee. Submit SAR online in the prescribed format and pay 90 percent fee. Coordinate with the NBA for the visit of visiting team.

Visiting team submits evaluation report to the NBA. And there are several process that take place after that. So, after due process, NBA communicates its decision to the institute. The institute if it has any reservations can appeal to NBA with clarifications. Roughly, this is the sequence of steps that one goes through for NBA accreditation, the more details of that all conditionalities and all that are presented as a kind of flowchart on the NBA website.

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MIU3

- The Unit MIU3 presents what outcome based education is in the context of undergraduate engineering programs.

So, that is a brief on the NBA accreditation process, why it has come into existence and what is its purpose and how one should go about doing it. So, in the next unit, we will try to present what outcome based education is in the context of undergraduate engineering programs. Why is this important? The very fact that India has become a signatory to the

Washington Accord, it is compulsory that you, we conduct our efforts in the framework of outcome based education. Thank you very much for your attention.