



# महाराष्ट्र राज्य तंत्र शिक्षण मंडळ

(स्वायत्त) (ISO ९००१ : २००८) (ISO/IEC २७००१:२००५)

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दूरध्वनी क्र: २६४७१२५५ / २६४७०९१६

फॅक्स : ९१-०२२-२६४७३९७९

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दि. 12 SEP 2017

## परिपत्रक :

प्रति,  
प्राचार्य,  
मंडळाशी संलग्नीत सर्व  
AICTE व Pharmacy  
अभ्यासक्रम राबविणा-या संस्था.

**विषय:-** शैक्षणिक वर्ष २०१७-१८ पासून लागू केलेल्या "I- Scheme" अभ्यासक्रमाची अंमलबजावणी करण्याकरिता सुधारित CIAAN –Norms-२०१७ बाबत.

मंडळाशी संलग्नीत सर्व संस्थांना कळविण्यात येते की, मंडळाने शैक्षणिक वर्ष २०१७-१८ पासून नव्याने सुधारित "I- Scheme" Curriculum ची अंमलबजावणी सुरु झालेली असून प्रथम सत्र सुरु झालेले आहे. तथापि Curriculum अंमलबजावणी आवश्यक असलेले **Curriculum Implementation & Assessment Norms (CIAAN- Norms -२०१७)** मंडळाने सुधारित केलेले आहे. सोबत सुधारित CIAAN- Norms -२०१७ ची प्रत उपलब्ध करून दिलेली आहे.

CIAAN- Norms -२०१७ हे Part-A- ( Philosophy), Part-B- (Evaluation Criteria i.e- Academic Monitoring Proforma) व Part-C- (Proforma) मध्ये वर्गीकरण केलेले आहे.

सदर CIAAN –Norms-२०१७ हे प्रामुख्याने "I-Scheme" मधील प्रथम व द्वितीय सत्राकरिता लागू राहतील. तदनंतर CIAAN NORMS -२०१७ हे टप्याटप्याने लागू राहतील. परंतु दुस-या व तिस-या वर्षाकरिता G-Scheme चालू असल्याकारणास्तव जुनेच Proforma लागू राहतील याची संस्थानी नोंद घ्यावी.

(डॉ. अभय वाघ)

संचालक

म.रा.तंत्र शिक्षण मंडळ, मुंबई.

प्रत.

उपसचिव, महाराष्ट्र राज्य तंत्र शिक्षण मंडळ, विभागीय कार्यालय, मुंबई, पुणे, औरंगाबाद व नागपूर यांना माहिती व पुढील कार्यवाही करीता.

**MANUAL FOR**  
***CURRICULUM IMPLEMENTATION***  
***AND ASSESSMENT NORMS***  
**(CIAAN 2017)**



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**MAHARASHTRA STATE BOARD OF TECHNICAL EDUCATION, MUMBAI**

**For Diploma in Engineering and Technology**  
**Full time Three years Program**

**(with effect from 2017-18 progressively)**

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In order to ensure the uniformity in the curriculum implementation **CIAAN -2001** was developed by following committee.

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Considering outcome based new curricula i.e. 'I' Scheme, the following committee has been given the responsibility to revise the **Norms for Academic Monitoring for Engineering Diploma Programs** to be implemented from 2017-18 progressively.

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## FOREWORD

The Maharashtra State Board of Technical Education has adopted the policy of designing the curriculum based on the scientific principles since 1995. As a part of curriculum implementation, the student assessment norms have been implemented. These norms are now known as Assessment Norms 96. The revision of curriculum was done through various identified institutions (Design Centres) since 2001-02. The various curriculum revisions over a period of time mainly focused on professional and generic skill development in students and meeting the desired quality of teaching, learning and management. This process needed redesign of whole education process and to plan the activities at various levels such as institution, department and teacher level on regular basis. The Heads of Institutions are required to perform various functions to manage the change along with their routine activities.

The Curriculum Implementation and Assessment Norms (CIAAN) are prepared for ensuring the effective curriculum implementation. The word curriculum implementation shall not be taken in an isolated manner but as an integral part of curriculum development process at institutional level.

The latest revision of curriculum emphasises on the philosophy of Outcome Based Education (OBE) advocated by NBA. The method of OBE curriculum revision is executed in reverse manner. That is first, the Programme Outcome, Courses outcomes and Practical outcome are defined outcomes are defined, then the learning experiences are designed to achieve these outcomes. Whereas, during curriculum implementation, the teacher will analyse the contents and then develop the learning experiences which will ensure the accomplishment of outcome.

The OBE basic philosophy comprises of 5-D approach. Define the outcome, Develop the curriculum, Deliver the instructions, Document the result and Define the future course of action for improvement.

While revising the curriculum, the latest industry requirements as well as expectation from pass-outs (graduate attributes) were also considered. During the each stage of curriculum revision, the industry experts, being the main stake holders, are invited and actively involved. The product of this curriculum development process is termed as "I" Scheme curriculum. As the outcomes are finalised and validated by industry experts, most of programme curricula are now industry tailor-made and will certainly create industry ready pass-outs thus enhances diploma holders employability.






The effective implementation of curricula requires curriculum implementation guidelines for teachers and students. The Curriculum Implementation and Assessment Norms (CIAAN) is the document produced by MSBTE which will ensure uniform and smooth implementation of new "I" Scheme curricula. The newly designed CIAAN norms are focussed on the Program Outcomes (POs) and Program Educational Outcomes (PEOs). This philosophy provides feedback at regular intervals from all stake holders. This will also be helpful to the institutions to manage the resources effectively and efficiently.

The present CIAAN norms are revised and accordingly the Academic Monitoring proforma is also revised to compatible with NBA norms. The marks related to SAR proforma of NBA of Curriculum Teaching Learning Process & Program Outcomes (POs)/ Course Outcomes (COs) will be earned by every institute affiliated to MSBTE.

In the academic monitoring evaluation sheet out of 250 marks, around 70 % of marks are allotted to exclusively Academic Criterion. Even the important issues like Vision/Mission, Programme Outcome, Course outcome, Practical outcome, assessment of Micro-project etc. features of curriculum have been adequately taken care by preparing respective proforma. The documentation of progressive assessment and end semester examination will be carried out in respective proforma given in the CIAAN norms.

The efforts taken by the project team towards preparing the revised CIAAN document are appreciated. I am sure that this will bring uniformity in the curriculum implementation and student assessment to meet the expected outcomes.

  
(Dr. Abhay Wagh)  
Director  
MSBTE, Mumbai





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**PART - A**

**PHILOSOPHY**



## 1.0 Introduction

The base for the 'I' scheme curriculum is 'Outcome-Based Education'. This means that all the outcomes at every stage of this curriculum (whether it is at macro level or at micro level) are expressed in '**tangible**' terms. This again means that everybody concerned with this curriculum will look at what the student '*can do*' at the end of every small and large teaching-learning (T-L) activity, but not by what the student 'knows', because 'knowing' is a *covert* activity happening within the brain of the individuals, whereas outcome is an *overt* behavior exhibited because of the possession of some skills.

It goes without saying that the basic purpose of curriculum revision is to remove obsolescence and improve the relevance. If the course contents of most of the Programs in the revised curricula are compared with existing curricula, it will be noticed that there is drastic change in the contents and the methodology of their delivery. For example, in Electrical Engineering till now only three technologies of power generation namely thermal, hydro and nuclear are taught in detail. Whereas in this revised Electrical Engineering curriculum, renewable energy technologies such as wind and solar energy are added by considering their relevance in present. Similarly, due to the advancements in digital technology, the emphasis is shifted from analog technology to digital technology in the curriculum of Electronics and Communication Engineering Program. Further, in some Programs such as Plastics, Textile Technology etc., contents on calculus and vector algebra which appeared irrelevant are eliminated. Still further, the 'environment' related courses are designed specific to the Program rather than just a general awareness level course as was being offered earlier. These and other features have been incorporated in this revised curriculum with the justifications for such changes.

## 2.0 Philosophy of Curriculum Design

The present scenario of globalization and the relatively young population of India, as compared to other developed countries of the world, have created a situation of demographic dividend for our country. This means that a great opportunity to groom young and capable work force to meet the global needs is available but the acceptance of our work force relies on the fact that the curricula offered by Polytechnics match with the provisions of Sydney Accord for Engineering Diploma Programs. National Board of Accreditation of India (NBA) has accepted most of the features of this accord. One of the core features of this 'Accord' is that the curriculum should be so designed that its implementation leads to development of tangible outcomes in the students. In this backdrop, the salient features of the revised curriculum are explained in the following paragraphs.

Figure 1 provides a brief overview of the entire outcome-based curriculum development process.



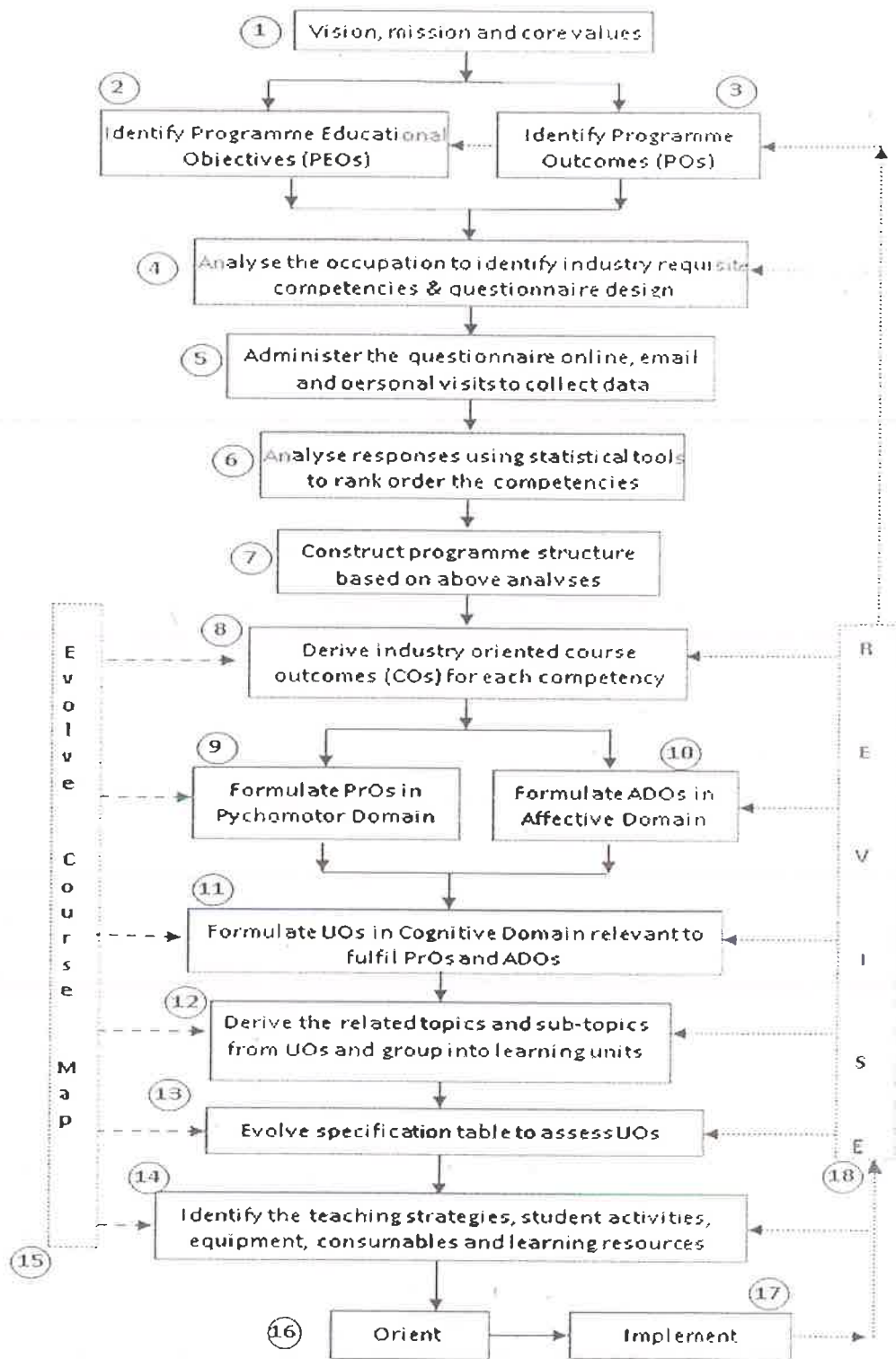


Figure 1 “Engineering Diploma Curriculum NITTTR-MSBTE Model 2016”



## 2.1 Occupational Analysis

The 'I' scheme curriculum is set in motion by the MSBTE undertaking the 'occupational analysis' of each of the 18 Programs with industry inputs at various levels. Beginning with the first industrial meet in October 2015, where MSBTE invited the industries and NITTTR Bhopal for their views on curriculum revision. The deliberations involved the MSBTE views and expectations of the industry and the expertise of NITTTR in curriculum development. NITTTR Bhopal was entrusted the responsibility of consultant for the task of revising the curriculum on the outcome based education philosophy through the team of MSBTE identified Program coordinators and subject experts from polytechnics. The coordinators and the subject experts trained on-the-job for the project of curriculum revision. The trained coordinators and subject experts can further train their colleagues from different parts of the Maharashtra state. In this manner, the new curriculum is implemented in letter and spirit.

## 2.2 Employer and Alumni Survey

As the primary stakeholders of the curriculum are the employers (industries) and the pass outs of the professional engineering diploma Programs (Alumni), the expectations of the industry about competencies needed in real life work situation and the views of alumni who have gone through the hardships of adapting to the industrial scenario are considered vital. Hence, the first exercise was to design relevant questionnaires for industries and alumni to find out the competencies expected from each of the diploma Program.

For this purpose, a suggestive list of competencies was identified for each Program and the same was circulated among industries employing pass outs of that Program. Industries and alumni were asked to rate each competency (on the scale of 1 to 4) according to their view point. Based on this rating, weighted mean for each competency was calculated and the competencies were ranked in the order of their weighted mean. In addition, the industries and alumni were also asked to suggest any additional competency they feel necessary amongst the pass outs. They were also requested to inform any new technology, material, machine, equipment, instrument, procedures, software etc. which need to be included in the curriculum.

Based on analysis of data received from Industries and the alumni, the relevant courses matching the competencies were identified and the Program structure for each Program was evolved.

Competencies having low weighted mean were dropped or given less emphasis in the Program. The competencies having more weighted mean were given more emphasis in the teaching-learning process. However, competencies related to emerging areas which received less weighted mean since they were not extensively required in most of the industries, were earmarked for elective courses.





For each competency, the course outcomes (COs) are defined and for each course outcome, practical outcomes (PrOs) are evolved from these practical outcomes, unit outcomes (UOs) are derived and from these UOs, the contents for topics and subtopics are compiled.

### **2.3 Industry-Based Competencies in Addition to PEOs and POs**

NBA in its latest guidelines (October 2015) has suggested 10 general POs (applicable for all Programs of Diploma in Engineering) and 2 to 4 Program Specific Outcomes (PSOs). In this curriculum there are a maximum of 14 POs for each Program and around 3 to 6 COs in each course which sums up to about 150 COs in each Program (considering that there would be about 33 courses in each Program).

Every industry or employer is more familiar with competency profiles of the Pass out students and hence the need for competency statements arose. Competency is generally a course specific single macro-level statement which indicates what the student can do in tangible terms at the end of the semester of a particular course. It is defined as cluster of skills encompassing the three domains of learning - cognitive, psychomotor and affective. Competencies are normally developed by knowledge, skills and behavior acquired during many courses. **Thus, competencies identified by industry research for the whole Program is mentioned in the beginning of each Program.**

### **2.4 Practical Outcomes (PrOs), Affective domain outcomes (ADOs) and Unit Outcomes (UOs) as subset of COs**

The Washington and Sydney accords are based on Anglo-American model of education wherein each university has its own engineering college/polytechnic in its campus, which works as kind of an autonomous institute and the curriculum is developed and implemented by its own teachers for their own students. In such situation, Program Outcomes and Course Outcomes, are written in more general terms rather than specific to serve the purpose because the curriculum developer, teacher and assessor is same and he/she knows the spirit behind formulation of the POs and COs.





Wherein, in case of large state such as Maharashtra, numerous polytechnics follow the same curriculum. The curriculum developer, teacher and the assessor are different. In such a scenario, for better attainment of COs, outcomes for practicals (PrOs), outcomes in affective domain (ADOs) and outcomes for Units (UOs) are derived as subset of COs. These PrOs, ADOs and UOs are utilized for compilation of content for the particular course. The course map in figure 2 below shows the details of correlation among Competencies, COs, PrOs, ADOs, UOs and curriculum content.

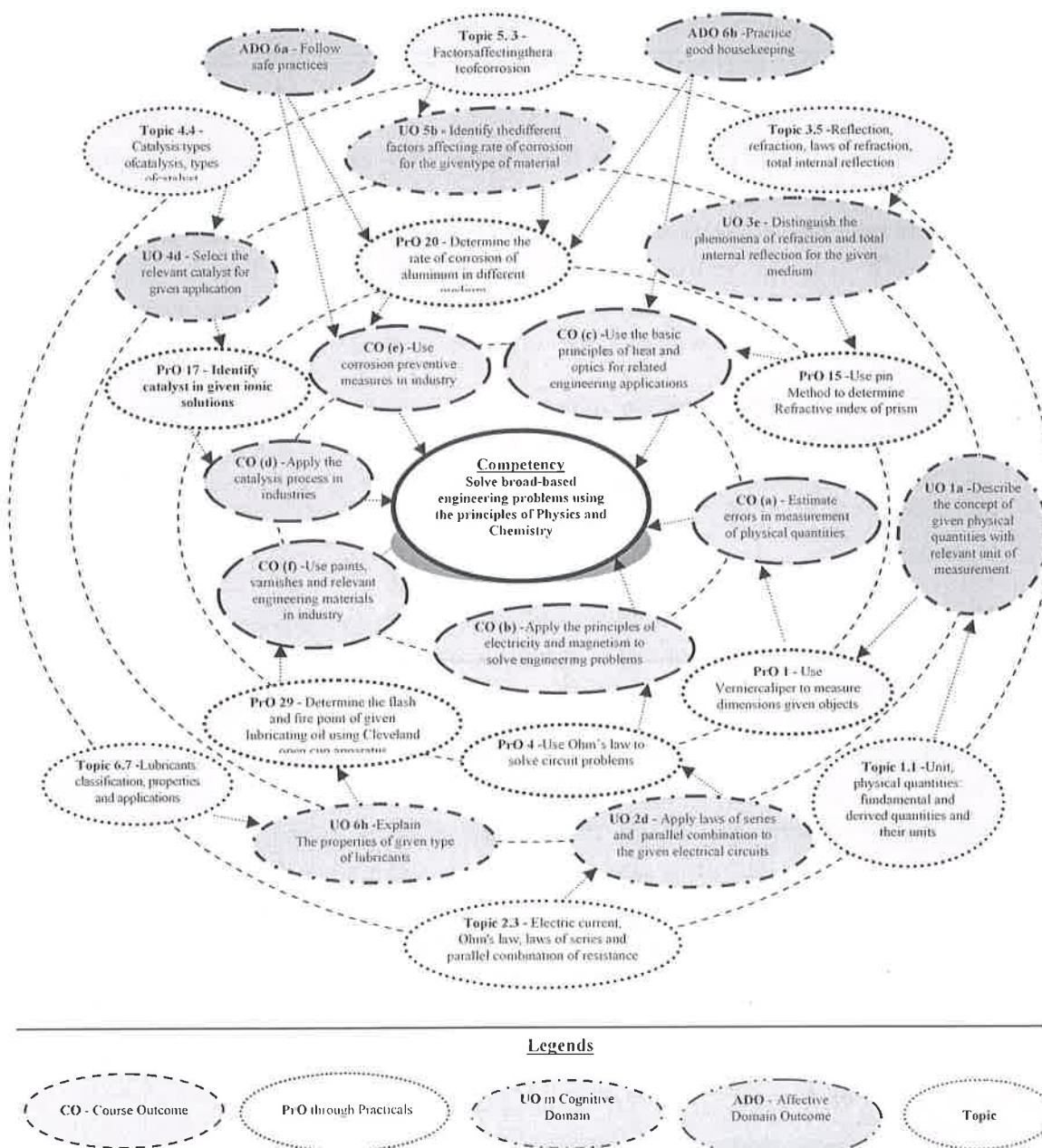


Figure 2 - Course Map

### 2.5 Micro-Projects to Assess the Attainment of Competency and COs

The analysis of COs indicates that, they are performance and Industry oriented and also an integration of theory and practical inputs of a course. These COs are broken down into



'*Practical Outcomes*' (PrOs) and the underpinning theory required to achieve those PrOs have been specified as '*Unit Outcomes*' (UOs). This makes Teaching Learning (T-L) process more effective and it enables to assess PrOs and UOs in a course wise manner.

It may be assumed that if a student has attained PrOs and UOs, then it means that s/he has also acquired COs. The concept of micro-projects is introduced to reinforce the attainment of COs. Completion of these micro-projects would ensure integration of PrOs and UOs and thus attainment of COs. Moreover, many abilities required by industry such as ability to plan, take decisions, work persistently, work in teams as leader and as a member, arrange resources, communicate effectively, find alternative solutions, identify, access and use required knowledge' and solve problems etc. can be achieved by engaging students in micro-projects.

Thus, in this curriculum model, it is mandatory for every student to complete one micro-project in each course. Students may take micro-project in groups of 10 to 12 students during first semester and progressively the group size becomes 4 to 5 students in the fourth semester. From fifth semester onwards, it is envisaged for individual micro-projects. A list of suggestive micro projects is provided in each course and students may choose micro-projects from that list or come up with relevant titles in consultation with course teachers.

*Sample rubrics are provided for assessment of micro-projects. Assessment based on these rubrics would help in qualitative evaluation of the student's abilities required by industries and this will also help students to improve upon areas of concern.* The detailed process for assessment of micro project with sample rubrics is provided in lab manuals of respective courses.

*On completion of the diploma Program, each student would have a set of around 30 micro projects compiled in the form of a Portfolio, which he/she present to the employers at the time of interview.*

## 2.6 Assessment of Minor and Major Projects

Minor and Major projects are introduced at the fifth and sixth semester of the diploma Program. For *Minor* and *Major Projects*, in addition to project report, student needs to prepare a portfolio for his/her attainment of expected graduate attributes. A sample portfolio format with suggestive questionnaire shall be provided by respective department. The above-mentioned portfolio would help student in self-assessment which ultimately lead to acquaintance of skill sets for holistic development.

The progressive assessment of project works will be carried out at three stags namely;

- Planning (during 4<sup>th</sup> to 5<sup>th</sup> week)
- Partial/mid execution (during 10<sup>th</sup> to 12<sup>th</sup> week)
- At completion stage (during 14<sup>th</sup> to 16<sup>th</sup> week)

Assessment guidelines and feedback for each stage are incorporated in the course curriculum.

The philosophy of development of curriculum and its implementation is depicted in the figure 3.



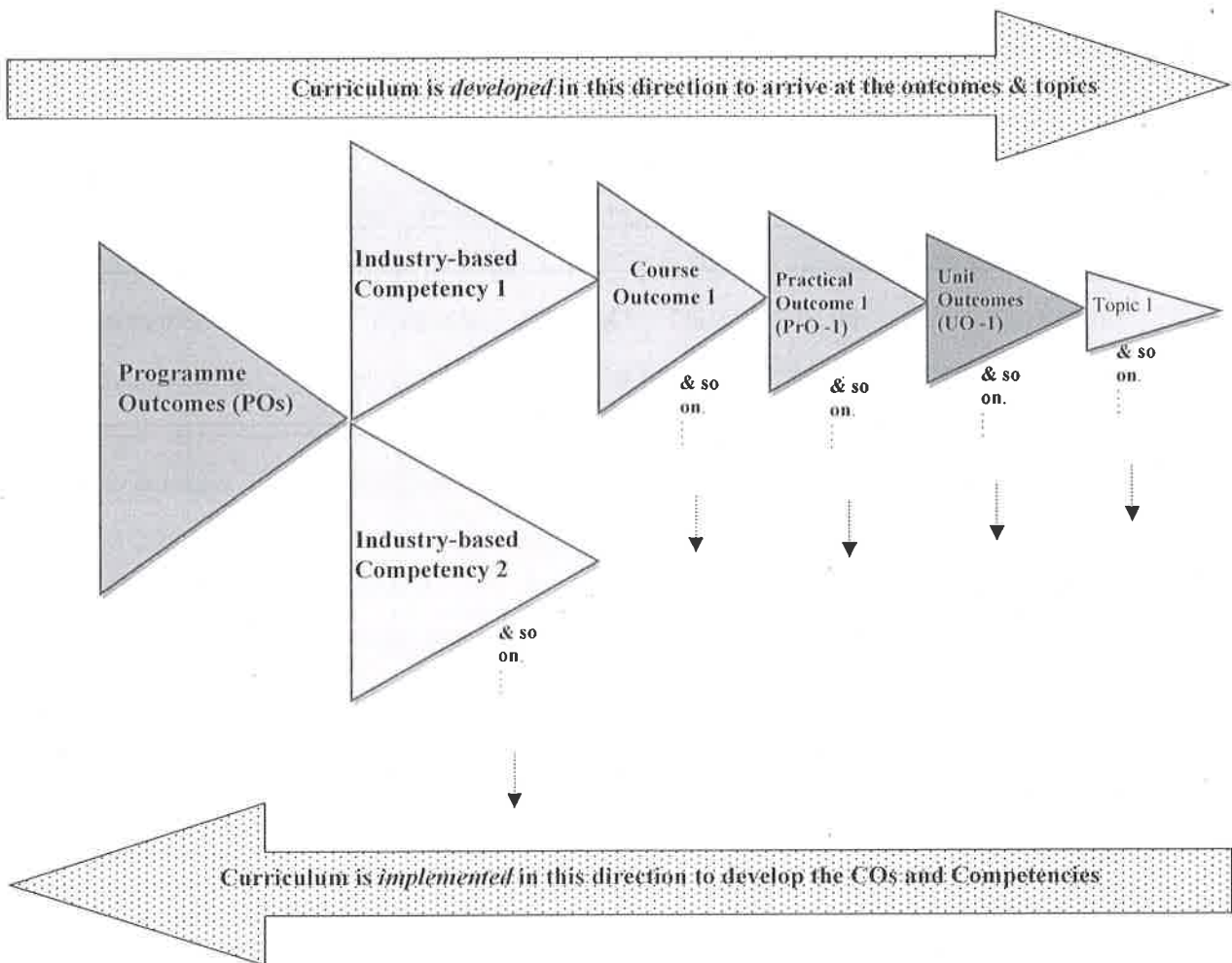


Figure 3 Course Detailing



### **3.0 CURRICULUM IMPLEMENTATION & ASSESSMENT NORMS:**

(In pursuant to clause 22 of Maharashtra State Board of Technical Education Act XXXVIII of 1997)

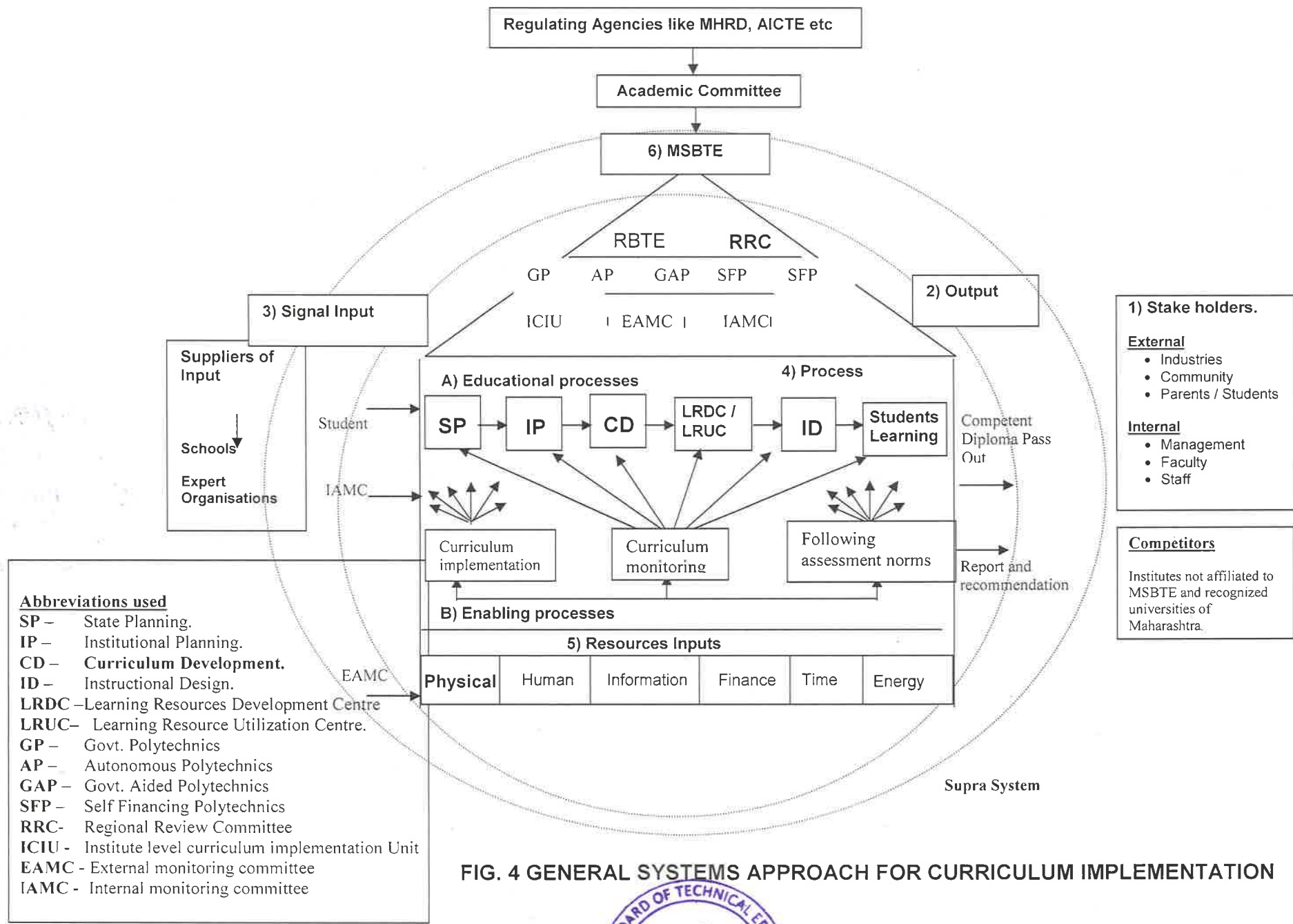
#### **3.1 Approaches for Curriculum Implementation**

The MSBTE has designed this curriculum by adopting the model of Outcome Based Education (OBE) wherein it develops three key attributes among graduates namely Knowledge, Skill and Behaviour. The same approach has been considered while implementing the curriculum. (Refer Fig. 4) The salient features from the diagram are as follows.

The stake holders of the system are industry and community that requires competent technical manpower. In order to have the desired outcome, curriculum implementation process should be well planned and executed. The diagram shows sequential learning process, from state level planning to student's meaningful learning. To carry out the educational processes, the enabling processes have been identified as shown in the diagram. To ensure effective curriculum implementation, the management structure has been proposed under the control of MSBTE such as RBTE, RCC, ICIU, EAMC and IAMC. The mechanism proposed will ensure the quality of the processes. This will be achieved through the monitoring carried out by EAMC and IAMC In order to improve the relevance of graduates, the philosophy of outcome based education is implemented for ensuring the outcome rather than output. The diagram shows the outcome of this process.







**FIG. 4 GENERAL SYSTEMS APPROACH FOR CURRICULUM IMPLEMENTATION**



## 3.2 Norms and Strategies

### 3.2.1 Norms for Curriculum Implementation Process

- 3.2.1.1 Establish ICIU in the institute and identify the faculty for the same.
- 3.2.1.2 Prepare the curriculum implementation plan for the institute as a whole. Schedule of activities under the plan should be communicated to all the departments and also to the students wherever applicable.
- 3.2.1.3 Each department should prepare *session plan* of curriculum implementation.
- 3.2.1.4 Each teacher has to develop his/her instructional plan for lectures, practical and allied activities related to teaching.
- 3.2.1.5 Department has to maintain the record in the Prescribed Proforma to facilitate the internal and external monitoring.
- 3.2.1.6 The student's attendance shall be maintained as per the Government Resolution and informed to parents from time to time.
- 3.2.1.7 The performance of the students shall be displayed on the notice board after each progressive evaluation.
- 3.2.1.8 The teacher should make use of advanced teaching methods such as CAI packages, Self-developed power point presentations, Flash presentations, readymade presentation Internet etc. Preferably avoid dictation of notes. However circulation of printed notes will be appreciated.
- 3.2.1.9 The focus in implementation should shift from Teaching to Learning.

### 3.2.2 Strategies for curriculum implementation:

#### 3.2.2.1 State Level:

1. Academic committees of MSBTE through Expert committees will formulate the policies and guidelines and communicate the same to the institutions.

#### 3.2.2.2 Institute Level:

1. Principal through ICIU shall develop the plan of implementation for all the disciplines and follow uniform procedures as Directed by MSBTE time to time.
2. Principal through ICIU will analyse the feedback given by IAMC and EAMC and take remedial measures.
3. Principal shall arrange training Programs for faculty and staff so that curriculum implementation is effective.

#### 3.2.2.3 Departmental Level:

1. Head of the Department shall prepare *session plan* of implementation and take review of the progress once in month.
2. Head of the Department shall ensure that the faculty prepares plans for classroom and laboratory instructions.
3. Head of the department shall maintain all the records of implementation and assessment.
4. Head of the Department shall analyse the performance of students in respect of class test, skill test and term end examinations. Suitable actions for improving the overall performance shall be taken by the department.



#### 3.2.2.4 Individual (Teacher) Level:

1. The course teacher- regular / Adhoc / contract / visiting shall prepare the session plan for class room sessions and practical sessions.
2. The course teacher shall select appropriate methods of instructions to ensure meaningful learning.
3. The course teacher shall follow the philosophy of Curriculum Design and implement it in the same spirit. It is expected that there will be shift from teaching to learning of students.
4. The Lesson plan forms an important tool for delivering the contents during teaching learning process. Hence every teacher is expected to appreciate this concept and accordingly prepare lesson plan for a given subject and implement.
5. The course teacher shall use the self-feedback from the concerned proforma for improving instructional methods and self-development.

### 3.3 Mechanism for Curriculum Implementation

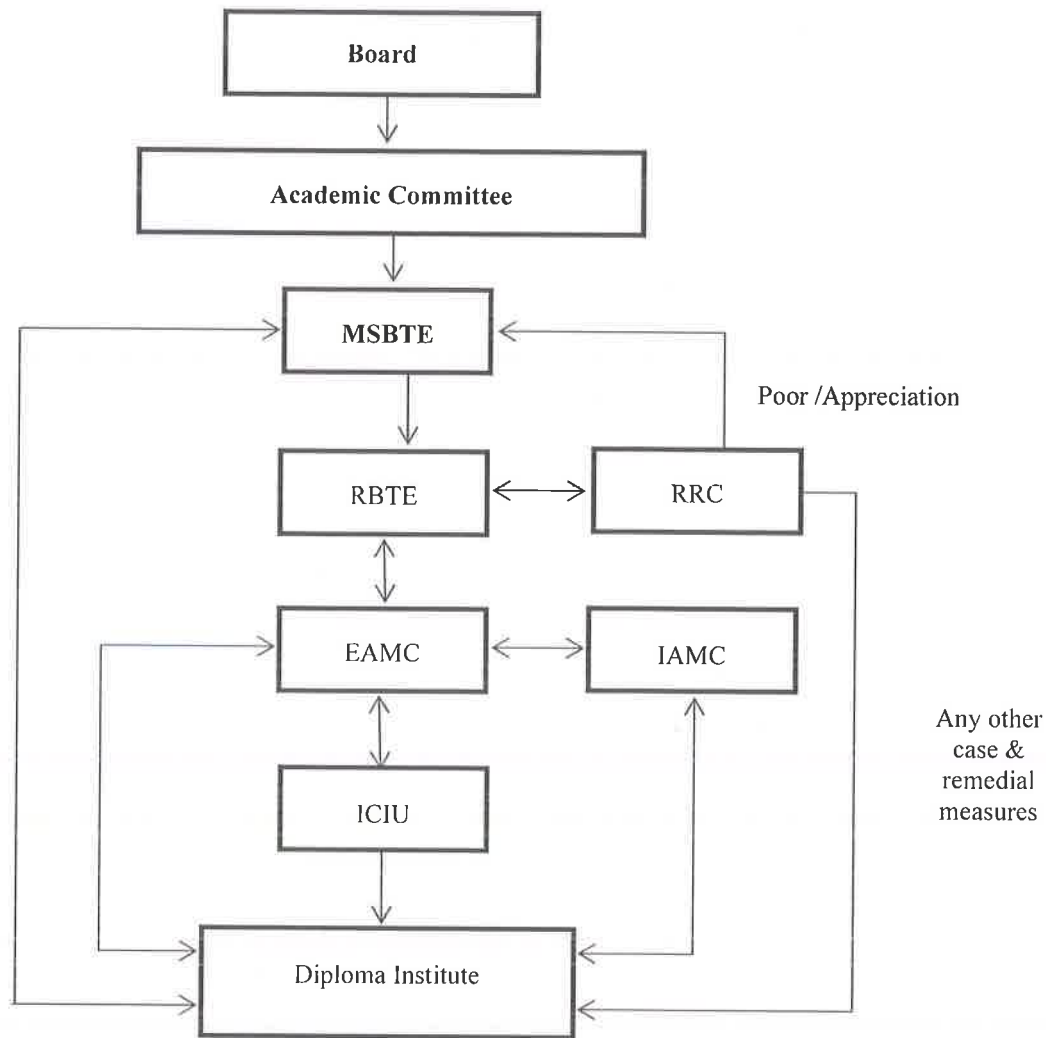
Fig. 5 shows the structure of curriculum implementation mechanism. The salient features of the mechanism are as follows.

Academic committee will be responsible for formulating the policies, providing the resource support and guidance to the institutions, carry out the research and suggest the remedial measures in solving the problems.

1. Institution Curriculum Implementation Unit (ICIU) shall be set-up in every polytechnic. This unit will be responsible for institutional planning, monitoring curriculum implementation and to maintain the records.
2. External Academic Monitoring Committee (EAMC) - In order to ensure proper implementation of the curriculum, a committee will be formed. The members of the committee will be from other institutions.
3. Internal Academic Monitoring Committee (IAMC) - The ex-officio members of the ICIU will form the committee for internal monitoring. This committee is expected to follow the guidelines provided by Academic Committee through MSBTE and ensure its implementation for all the departments in the institute.







**Fig. 5 Structure of Curriculum Implementation Mechanism**

1. **RRC** : **Regional Review Committee.**
2. **EAMC** : **External Academic Monitoring Committee.**
3. **ICIU** : **Institute Level Curriculum Implementation Unit.**
4. **IAMC** : **Internal Academic Monitoring Committee.**

### 3.3.1 INSTITUTE LEVEL CURRICULUM IMPLEMENTATION UNIT (ICIU)

#### 3.3.1.1 Structure of ICIU

The organisational structure of ICIU will comprise of the following officials -

- |   |                                 |
|---|---------------------------------|
| 1. Principal / Management representative*   | Ex-officio Chairman             |
| 2. H.O.D.   | One from each Dept. Ex-officio. |
| 3. Representative from institutes teaching staff<br>(To be nominated by the principal)  | Member (2 numbers)              |
| 4. Academic Co-ordinator<br>(HOD / Sr. lecturer)  | Ex-officio Member Secretary     |
| 5. Student representative<br>(One female and one male to be nominated by the principal) | Members (2 Numbers)             |
| 6. Parents Representative   | Member (1 Number)               |



(To be nominated by the principal)

**Figure 6** shows the graphical structure of ICIU

**Note** - \* For Govt. / Govt. aided Institution the Principal of the Institution shall be Chairman of ICIU and for Unaided Institutions the Management Representative shall be the Chairman of ICIU and Principal shall then be an additional Ex-officio member of ICIU.

### **3.3.1.2 Roles and Responsibilities of ICIU**

1. Study Curriculum development process and prepare curriculum implementation plan at institute level.
2. Identify the resource gaps at institute level and develop plan to make up the deficiencies.
3. Plan for Academic Calendar of the institute taking into consideration the calendar from MSBTE.
4. Guide the departments regarding the philosophy of curriculum design and its implementation.
5. Ensure uniform implementation of MSBTE norms for student assessment.
6. Analyse the reports of internal and external monitoring committees and take remedial action.
7. Maintain the records of all activities in the Prescribed Proforma.

### **3.3.1.3 Terms of Reference**

1. Ex-officio members are permanent members.
2. All external members will be by rotation.
3. The term of external members shall be for minimum 1 year and maximum 3 years.
4. ICIU will meet at least once in 6 months.
5. Academic co-ordinator will prepare the agenda; maintain the minutes of the meeting and prepare the action taken report.
6. Minimum quorum shall be half the number of members +1.

### **3.3.1.4 Roles and Responsibilities of Principal / Management Representative.**

The institute is responsible to ensure effective implementation of curriculum. MSBTE has decided to establish ICIU in each institute that will help the Principal to focus on academic activities in line with the philosophy adopted by MSBTE. The principal of the institute will be the chairman of ICIU where there is no representative of management. In this context the roles of the Principal, as Chairman, ICIU are as follows;

1. Establish a separate cell in the Institute to plan, implement and monitor the progress of curriculum implementation.
2. Provide infrastructure facilities to the identified Academic Co-ordinator such as space, computer and one clerical staff.
3. Conduct meetings of the heads of Department and teacher to ensure smooth functioning of ICIU.
4. Provide guidance to support the Academic co-ordinator.

**Note:** In the cases of unaided institutes where the management representative will act as the Chairman of ICIU, the Principal will assist the Chairman in functioning of ICIU.



### 3.3.1.5 Role and Responsibilities of Academic Coordinator

It is desirable to have uniform policy and procedures for all the departments in the institute while implementing the curriculum. Academic co-ordinator is a key person to decide and adopt uniform procedures. The Role and responsibilities of academic co-ordinator are listed below.

1. Get acquainted with the philosophy of curriculum implementation and develop insight regarding theories of learning, systems thinking and theories of knowledge.
2. Arrange the meeting of all teachers to elaborate the philosophy and the approach of curriculum implementation. Initially more guidance to the teachers who are implementing laboratory manuals, using CAI packages and arranging the activities for developing generic skills.
3. Study and explain the different proforma developed and prescribed by MSBTE.
4. Maintain the record of all the activities in ICIU.
5. Identify the problems occurring regarding curriculum implementation.
6. Formulate the remedial measures through discussion with principal and HOD.
7. Identify the common resources required for implementing the curriculum and facilitate the same in consultation with Heads of the Department and Principal.
8. Arrange the meetings of ICIU and maintain its record.
9. Provide facilities to EAMC.
- 10 Identify needs of training for supporting staff and teachers and communicate the same to MSBTE. Additional training shall be organised locally as per needs.
- 11 Encourage the teachers to contribute in various projects undertaken by MSBTE e.g. learning resource development print and non-print.



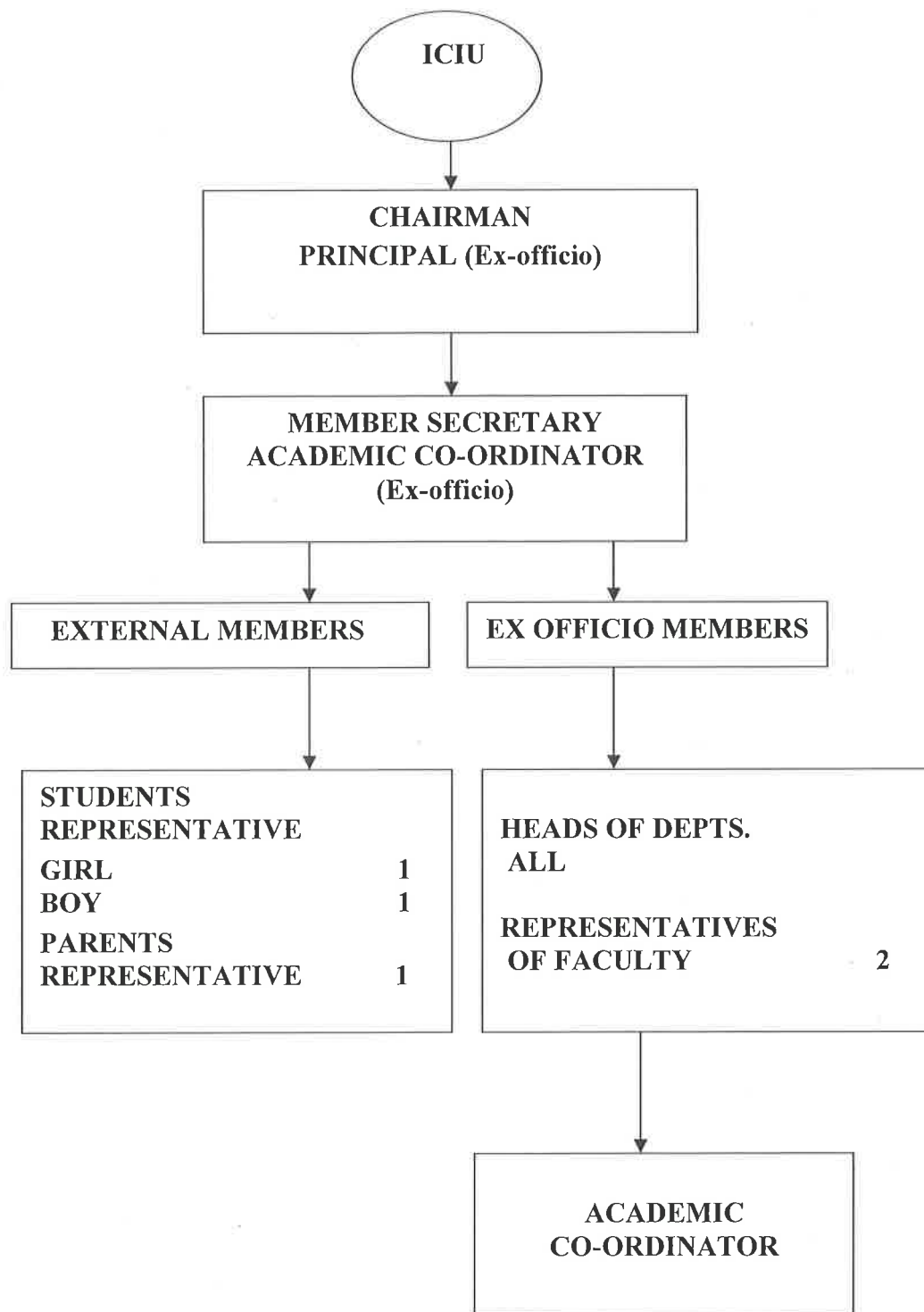


Fig. 6 Graphical structure of ICIU



## 4.0 Committees for Monitoring Curriculum Implementation

### 4.1 Regional Review Committee (RRC)

#### 4.1.1 Structure of RRC

The organizational structure for RRC will comprised of following officials.

Sr. No.	Designation	Title
1	Jt. Director of Respective Region	Ex-officio Chairman
2	Dy. Secretary RBTE	Ex-officio Member Secretary
3	Representative From institute	Principal from AICTE Institute - 01 Principal from Non AICTE Institute - 01 Principal from Pharmacy Institute - 01

#### 4.1.2 Roles of Regional Review Committee (RRC)

1. Discuss the report received by EAMC and verify that the monitoring is done as per the norms decided by MSBTE time to time. (At present Annex-I)
2. Suggest remedial measures to the institutes.
3. Give recommendations to the MSBTE regarding Institutes to be de-affiliated.
4. Give recommendations to the MSBTE regarding institute to be given letter of appreciation.

#### 4.1.3 Structure of IAMC and EAMC:-

##### **A) Structure of IAMC: (A committee of at least three members will monitor one Department)**

1. Principal / Management representative : Chairman and Ex-officio
2. Heads of Departments : (As per the nos. of Programs)
3. Representative from faculty : Two Members
4. Academic Co-ordinator. : (Identified HOD / Sr. Lecturer) Member



## **B) Guidelines for the formation of EAMC Committee:-**

<b>For AICTE Institutes:-</b>	<b>Selection Criteria &amp; Sequence of Selection</b>
<b>Chairman</b> (Principal of AICTE Institute)	Principal of In charge Principal, of Government / Aided Institutes.
	<b>OR</b> HOD of Government / Aided Institute.
	<b>OR</b> Principal of Private Institute having Teaching / Industry Experience more than 15 years.
Member 1:- (H.O.D / Selection Grade Lecturer of AICTE Institute)	HOD / Selection Grade Lecturer of AICTE Institute (Government / Aided) <b>OR</b> HOD of Private Institute having Teaching / Industry Experience more than 10 years.
Member 2:- (Sr. Lecturer of AICTE Institute)	Lecturer of AICTE Institute having Experience is more than 05 years.
Member 3:- (Lecturer of AICTE Institute)	Lecturer from Government / Aided Institute having Teaching / Industry Experience is more than 05 years.

<b>For Pharmacy Institutes:-</b>	<b>Selection Criteria &amp; Sequence of Selection</b>
<b>Chairman</b> (Principal / HOD of PH Institute)	<b>Principal</b> / HOD of PH Institute ( Government, Aided)
	<b>OR</b> Principal of Private Institute having Teaching / Industry Experience more than 15 years.
Member 1:- (Sr. Lecturer of PH Institute)	Lecturer from Government / Aided Institute whose Teaching/ Industry Experience is more than 05 years.

<b>For Non- AICTE Institutes:-</b>	<b>Selection Criteria &amp; Sequence of Selection</b>
<b>Chairman</b> (Principal / HOD of AICTE Institute)	<b>Principal</b> / HOD of AICTE Institute ( Government, Aided)
	<b>OR</b> Principal of Private Institute having Teaching / Industry Experience more than 15 years.
Member 1:- ( Lecturer of Non AICTE Institute)	Lecturer from Non AICTE Institute who's Teaching/ Industry Experience is more than 05 years.

### **4.2 Norms for Monitoring**

1. IAMC and EAMC shall follow the criteria and sub criteria wise marking system given in Annexure-I. They shall also follow the guidelines given in Annexure -II.
2. IAMC shall carryout monitoring once in each semester prior to the visit of EAMC.
3. Institutes established/ Program(s) commenced during last five years w.r.t. current academic year shall be monitored by EAMC twice in a year. i.e. in both semesters.





4. Institutes established/ Program(s) commenced earlier than five years w.r.t. current academic year shall be monitored by EAMC once in a year. i.e. in even semester.
5. RBTE through RRC will review the reports submitted by EAMC and will convey the remarks, suggestion for improvement to the institutes. RRC shall recommend to the MSBTE, the nature of action to be taken on the institutes.
6. MSBTE will take action based on the recommendation of RRC.

#### **4.2.1 Strategies of Monitoring**

1. Institute shall fill information in the online monitoring software developed by MSBTE and needs to be revised the same from time to time.
2. EAMC shall visit the institute / department(s) running the Program(s) and verify the correctness of information submitted online. The evaluation by EAMC shall be as per annexure I and EAMC shall also provide appropriate remarks / comments in the online software.
3. Members of EAMC shall provide guidance to the faculty for improvement during exit meeting.
4. The evaluation format shall be filled online by EAMC in the institute monitored and report shall be countersigned by the Principal / Head of the department of the monitored institute.

## **5.0 Students Assessment**

### **5.1 Philosophy of Assessment**

The outcomes mentioned in the curriculum document are to be achieved through proper implementation of the curriculum. During implementation of the curriculum, various methods of instructions are used to accomplish learning outcomes. The attainment of students' learning outcomes is measured through well-defined assessment processes and tools. The regular feedback from students will be useful to improve the teaching learning philosophy.

#### **5.1.1 Assessment Norms**

The assessment needs to be carried out as per the guidelines provided in curriculum.

##### **5.1.1.1 Norms for Progressive Assessment (Theory)**

1. For each course, two progressive assessment tests of 20 marks (max) each shall be conducted as per teaching examination scheme and MSBTE schedule & 10 marks are for Micro Project assessment.
2. No extra progressive assessment tests shall be conducted for candidates remaining absent.





3. Progressive assessment test shall be of 60 minutes & 75 minutes duration for three hours & Four hours duration end semester examination (ESE) paper respectively. The progressive assessment test question paper shall be as per MSBTE pattern.
4. The question paper shall contain at least 40 % application level questions to ensure learning outcomes by the student.
5. The model Answer for the progressive test must be displayed on the notice board on the next day of the Test. Marks obtained by student in each test shall be displayed within 10 days on the departmental notice board. Answer books of progressive assessment tests shall be shown to the students for feedback and suggestive improvements in the Class.
6. The Answer books of progressive assessment Tests shall be preserved by the respective faculty till the declaration of ESE result for that course. Every faculty must carry out an exercise of attainment of CO's & PO's of respective course in the progressive assessment Tests.
7. The micro project for 10 marks shall be assessed as per the evaluation rubrics & Teacher evaluation sheet (**Annexure I**).
8. The proforma D5 shall be used for compilation of the evaluation data of progressive assessment of theory for maximum 30 marks of each course.

#### **5.1.1.2 Norms for Assessment(Practical)**

##### **a. Progressive Assessment of Practical.**

Each experiment / assignment / Sheet / Job / Project shall be assessed continuously and the marks of continuous assessment shall be converted into final marks as per Proforma D3 by the course teacher.

##### **b. End Semester Examinations Assessment of Practical.**

The ESE assessment of practical work is done either by internal examiner or external examiner as per T.E scheme of MSBTE. Proforma D4 shall be used for the ESE of practical work.

**Note: The proforma D3, D4 & D5 to be preserved by Head of the respective Department.**



# **PART - B**

# **EVALUATION CRITERIA**



**B1 Criteria Wise Summary Table :-**

Sr. No	Criteria	Institute Level		Department Level		Total	
		No of Categories	Weight - age	No of Categories	Weight - age	No of Categories	Weight -age
1	Governance, Policy Making & Infrastructure criteria	24	43	03	10	27	53
2	Administrative Criteria	09	11	00	00	09	11
3	Academic Criteria	16	40	37	139	53	179
4	Socio-Economic Criteria	04	05	01	02	05	07
<b>Total</b>		<b>53</b>	<b>99</b>	<b>41</b>	<b>151</b>	<b>94</b>	<b>250</b>



**B2 Criteria for Academic Monitoring AICTE approved diploma courses affiliated to MSBTE**

Sr. No	Criteria & Sub-criteria	Institute Level		Dept. Level		Total	
		No. of categories & Sub-categories	Weightage	No. of categories & Sub-categories	Weightage	No. of categories & Sub-categories	Weightage
<b>I</b>	<b>Governance, Policy Making &amp; Infrastructure criteria</b>	<b>24</b>	<b>43</b>	<b>03</b>	<b>10</b>	<b>27</b>	<b>53</b>
A	Governing Board for policy and planning	5	7	1	2	6	9
B	Infrastructure	15	29	2	8	17	37
C	Laboratories Required	4	7	0	0	4	7
<b>II</b>	<b>Administrative criteria</b>	<b>9</b>	<b>11</b>	<b>00</b>	<b>00</b>	<b>09</b>	<b>11</b>
A	Office Automation in use	3	3	0	0	3	3
B	Redressal & Medical Care System	3	3	0	0	3	3
C	Facilities available	3	5	0	0	3	5
<b>III</b>	<b>Academic criteria</b>	<b>16</b>	<b>40</b>	<b>37</b>	<b>139</b>	<b>53</b>	<b>179</b>
A	Accreditation	0	0	1	4	1	4
B	Human Resource	2	7	7	31	9	38
C	Learning Resources	0	0	2	5	2	5
D	Curriculum Coverage	0	0	11	46	11	46
E	Professional Output	10	24	2	4	12	28
F	Efforts for faculty development and industry involvement	0	0	5	14	05	14
G	Result and Placements	2	3	08	33	10	36
H	Extra-Curricular Activities	2	6	01	02	03	08
<b>IV</b>	<b>Socio Economic criteria</b>	<b>04</b>	<b>05</b>	<b>01</b>	<b>02</b>	<b>05</b>	<b>07</b>
A	Alumni	3	3	0	0	3	3
B	Socio-Industry Involvement	1	2	1	2	2	4
<b>Total</b>		<b>53</b>	<b>99</b>	<b>41</b>	<b>151</b>	<b>94</b>	<b>250</b>

Sr. No	Academic Monitoring Grade	Percentage of marks obtained (Out of 250)
1	Excellent	≥ 86%
2	Very Good	≥ 71% to ≤ 85%
3	Good	≥ 56 % to ≤ 70%
4	Satisfactory	≥ 40 % to ≤ 55 %
5	Poor	< 40 %



## B3 Evaluation Criteria

<b>I</b>	<b>Governance, Policy Making &amp; Infrastructure criteria</b>
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SN	Criteria & Sub-criteria	Documents to be Verified	Observations	Marks	I/D (M)
<b>A</b>	<b>Governing Board for policy and planning</b>				
1	Governing board in place (As per AICTE Norms) Details of G.B members shall be placed on institute website.	Document regarding governing Board such as office order, Meeting register, acceptance letter of the member (As per AICTE norms:  Constitution: (Min. 11 and Max. 21 members) Chairman should be Technical Person Nominee of AICTE regional office DTE Nominee MSBTE Nominee Principal shall be Member Secretary	Yes	1	I (1)
			No	0	
2	Adequate representation of industry and academician on board <i>(For Pharmacy, from Pharmacy background only)</i>		At least one each from industry and reputed academicians	2	I (2)
			One member either from industry or reputed academicians	1	
			None either from industry or reputed academicians	0	
3	Whether meeting was conducted in last year or not? (EAMC to verify the documents of Minutes of meeting)		Yes	1	I (1)
			No	0	
4	Vision Mission of Institute (As approved in Governing / Board Meeting/Stake Holders)		Yes	2	I (2)
			No	0	
5	Vision Mission of Department (As approved in Governing / Board Meeting/Stake Holders) NA for Pharmacy		Yes	2	D (2)
		No	0		
6	Institute Website	Physical/Online Verification	Yes	1	I (1)
			No	0	



<b>B Infrastructure</b>					
1	Built up area as per AICTE/ <u>PCI</u> Norms for Pharmacy course	Deficiency report of current year Extension of Approval (EOA) Application to AICTE	More than or as per AICTE norms	2	I (2)
			Less than AICTE norms	0	
2	Boys Hostel facility ( <b>Own/Rented</b> )	Physical Verification	Yes	1	I (1)
			No	0	
3	Girls Hostel facility		Yes	1	I (1)
			No	0	
4	Number of Laboratories as per AICTE/ PCI norms and Area as per Norms	Six	6	D (6)	
		Five	4		
		Less Than 5	0		
5	Library:- Number of books in library (Preferably as per MSBTE/PCI curriculum) (20 years max for calculation)	Accession register of library, register showing no. of books, Bill of a purchase or grants	More than AICTE/ <u>PCI</u> Norms	5	I (5)
			As per AICTE/ <u>PCI</u> Norms	4	
			Below AICTE/ <u>PCI</u> Norms	0	
6	Whether Hygienic Condition is Maintained in the Institute (viz. Drinking Water, Washroom, Canteen)	Physical Verification	Yes	1	I (1)
			No	0	
7	Whether Girls Common Room along with sanitary napkins vending machine available?		Yes	1	I (1)
			No	0	
8	Facilities for Physically challenged students (e.g. Ramp, Toilets etc.)		Yes	1	I (1)
			No	0	
9	Availability of Book Bank Facility for more than 25% students	Yes	1	I (1)	
		No	0		
10	Applied Mechanics Laboratory with adequate equipments in working condition / <b>NA for pharmacy</b>	Physical Verification	Yes	1	I (1)





11	Computer center with adequate equipment in working Condition (as per the AICTE norms)	Physical Verification	Yes	3	I (3)
			No	0	
12	Whether Campus Canteen with food facility is available	Physical Verification	Yes	1	I (1)
			No	0	
13	Availability of CCTV Security/Surveillance System in the campus (Class room, Labs, Corridors, Library, Exam Control Room etc.)	Physical Verification	Yes	1	I (1)
			No	0	
14	Library:- No. of technical journals subscribed [Hard copies] per branch	Physical Verification	3or More	2	D (2)
			Less than 3	0	
15	Digital- Library facilities (Multimedia PCs with Internet surfing)	Physical Verification	6 or More PCs	1	I (1)
			Less Than 6 PCs	0	
16	Daily Library Usage (% of students doing book transactions) out of total students	Usage Register Issue/Receipt register (All Students on Roll are considered as Total students)	6% or more	5	I (5)
			3% to 5%	3	
			Less than 3%	0	
17	Student to Computer ratio, considering sanctioned intake.	Physical Verification	Better than 6:1	4	I (4)
			6:1	3	
			Between 6:1 and 8:1	2	
			More than 8 :1	0	

C Laboratories required for 1 <sup>st</sup> Year /Auxiliary requirement for Pharmacy					
1	Language Laboratory / <i>Machine Room</i> ( with adequate equipments and in working conditions)	Physical Verification	Yes	2	I (2)
			No	0	
2	Physics Laboratory with adequate equipment / <i>Herbal Garden for Pharmacy</i>	Physical Verification	Yes	2	I (2)
			No	0	
3	Chemistry Laboratory with adequate equipments / <i>Drug Museum for</i>	Physical Verification	Yes	2	I (2)
			No	0	





	Pharmacy				
4	Workshop /Aseptic Room for Pharmacy (with adequate equipments)	Physical Verification (Workshop area as per AICTE norms)	Yes	1	1 (1)
			No	0	

<b>II</b>	<b>Administrative Criteria</b>
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SN	Criteria & Sub-criteria	Documents to be Verified	Observations	Marks	I/D (M)
<b>A Office Automation in use</b>					
1	Computerized MIS system in place	Physical Verification	Yes	1	1 (1)
			No	0	
2	Computerized Accounting System	Physical Verification	Yes	1	1 (1)
			No	0	
3	Campus wide Networking (LAN/ Wi-Fi/ Intranet)	Physical Verification	Yes	1	1 (1)
			No	0	
<b>B Redressal and Medical Care System</b>					
1	Students grievance redressal cell in place (Minimum 2 meetings per semester)	Appointment/ Office Order, Register Record of Redressal Session, Student Feedback	Yes	1	1 (1)
			No	0	
2	Medical Facility for students		Yes	1	1 (1)
			No	0	
3	Women's Grievance Redressal Cell (Minimum 2 meetings per semester)		Yes	1	1 (1)
			No	0	
<b>C Facilities available</b>					
1	Internet facility for Students	Paid Bills for last three months duration of internet facility. (Internet band width required as per AICTE Norms)	Yes	3	1 (3)
			No	0	
2	Cooperative /Central Store Facility	Physical Verification	Yes	1	1 (1)
			No	0	
3	Availability of Digital Payment	Digital Wallet/ POS Machine	Yes	1	1 (1)
			No	0	



<b>III</b>	<b>Academic Criteria</b>
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SN	Criteria & Sub-criteria	Documents to be Verified	Observations	Marks	I/D (M)
<b>A</b>	<b>Accreditation</b>				
1	Accreditation by NBA	Physical Verification	Accredited	4	D (4)
			Applied	3	
			Not Applied	0	
<b>B</b>	<b>Human Resource</b>				
1	Principal (As Per current AICTE/ <u>PCI</u> Norms)	Appointment order, Mode of any appointment, approval by competent Authority.	Regular	5	I (5)
			In charge	2	
2	Head of the department (As Per current AICTE Norms) <i>(Not applicable to Exclusive Pharmacy Institute)</i>		Regular	5	D (5)
			In charge	2	
3	<b>Faculty to Student ratio based on approved intake:</b> Minimum 80% should be regular/full time faculty and remaining may be adjunct faculty/ Resource persons industry		1:20	6	D (6)
			1:21 to 1:25	4	
			Below 1:25	0	
4	Percentage faculty approved by State Govt/DTE/MSBTE or proposals sent to State Govt/DTE/MSBTE for approval & awaited; out of total required faculty (committee to verify details)		50% or more	10	D (10)
			20% To 49 %	5	
			Less than 20%	0	
5	Implementation of latest Pay commission for faculty salary	Physical Verification	Yes	2	D (2)
		No	0		
6	M. E. / M. Tech / M. Pharm qualified (Completed) faculty out of required posts as per AICTE norms	Marks sheet / PG Certificate	50% or more	3	D (3)
			35% To 49%	2	
			Less Than 35%	0	



7	No. of Faculties completed Ph.D. Study	Award Certificate Provisional or Final	1 or More	2	1 (2)	
			Nil	0		
8	No. of Faculties completed Ph.D. Study (Humanity, Common Staff)		1 or More	2	D (2)	
			Nil	0		
9	Lab Assistant/ <i>Technician</i> with technical qualification as ITI /Diploma/Science Graduate/ <i>D.Pharm</i> / DMLT per dept.		Appointment order / transfer record / Lab Assistant Profile	3 or more ( <i>2 or more for Pharmacy</i> )	3	D (3)
				<i>2 (1 for pharmacy)</i>	2	
				Less Than 2	0	
<b>C Learning Resources</b>						
1	LCD Projector in dept.	Dead Stock/Physical Verification	One	2	D (2)	
			Nil	0		
2	Faculties using self - developed Power Point /Flash presentations/Readymade presentations as a teaching aid during imparting the instructions.	Physical Verification	50% or more	3	D (3)	
			25% To 49%	2		
			Less Than 25%	0		

<b>D Curriculum Coverage as per MSBTE/PCI</b>					
1	<b>Curriculum covered as per MSBTE/PCI norms :</b> Number of Lectures/Practical covered as per norms till date of Monitoring only	Faculty Record, Student Feedback Formats, etc.	100%	5	D (5)
			90% To 99%	4	
			80% To 89%	2	
			Less Than 80%	0	
			100%	5	
2	<b>Curriculum covered as per MSBTE/PCI norms :</b> Theory subject lesson plan prepared & followed till date of Monitoring only		90% To 99%	4	D (5)
			80% To 89%	2	
			Less Than 80%	0	
			100%	5	
3	<b>Curriculum covered as per MSBTE/PCI norms :</b> Practical plan prepared & followed till date of Monitoring only		90% To 99%	4	D (5)
			80% To 89%	2	
			Less Than 80%	0	
			100%	5	
4	<b>Curriculum covered as per MSBTE/PCI norms :</b> Student feedback about satisfactory coverage of curriculum till date of Monitoring only		90% To 99%	4	D (5)
			80% To 89%	2	
		Less Than 80%	0		
		100%	5		
		90% To 99%	4		



5	<b>Attendance :</b> Average attendance of theory Subject, Practical subject, Average attendance of all Progressive assessment for all Theory & Practicals should be considered till date of monitoring	Attendance Register	90% or more	5	D (5)
			75% To 89%	4	
			Less Than 75%	2	
6	Availability of equipment <u>in working condition</u> for conduct of experiments / jobs as per MSBTE / PCI norms	Dead stock register, Record of use, Student Feedback, Physical Verification	91% To 100%	6	D (6)
			86% To 90%	4	
			75% To 85%	2	
			Less Than 75%	0	
7	Conduct of refresher courses for direct 2nd year admitted students for acquiring pre-requisite technical knowledge to cater requirement of direct 2nd year subjects / NA for Pharmacy Committee to verify documents certified by Principal	Documents certified by Principal,  Student feedback	Yes	3	D (3)
			No	0	
8	<b>Final year projects of the students :</b> Industry sponsored / Application oriented / Academic / NA for Pharmacy	Physical Verification	Industry Sponsored (Min 2)	4	D (4)
			Application Oriented (Min 2)	3	
			Study Based	0	
9	Vacation training organised for students (4 to 6 weeks) ((Number of students undergone the training / Number of students enrolled) *100) / NA for Pharmacy.	Certificates, Student Feedback	50 % and above of a class	4	D (4)
			30% To 49%	2	
			10% To 29%	1	
			Less than 10%	0	
10	Budget allocation and utilisation (Recurring, Non-Recurring & Maintenance) For Govt. and Aided institutions budget demanded, allocated and utilised	Physical verification of finance documents	Demanded, Allocated and 80% Utilized	4	D (4)
			Demanded, Allocated and utilization is between 40% to 80%.	2	
			Demanded, Allocated and utilization is less than 40%	0	
11	<u>Assessment of Students' Practical Training – Exam conduction, (Applicable only to Pharmacy Institutes)</u>	<u>Documentation, Project Report, Oral records etc</u>	<u>Conducted</u>	14	D (14) Ph
			<u>Not conducted</u>	0	



E Professional Output					
1	Number of papers presented by the faculties in National / International Journals/ conference in last/ current* academic year	Letter of acceptance, Copy Published	3 or More Papers from Institute	4	I (4)
			2 Papers from Institute	2	
			Less Than 2	0	
2	Proposals submitted to MODROBS/FDP/ RPS/ISRO/DST etc. during last/ current* academic year	Documentation, Copies of the submission of proposal with acknowledgment proof.	2 or more	4	I (4)
			1 To 2	2	
			No	0	
3	Number of consultancy / testing / patient counselling ( for Pharmacy) projects undertaken during last/ Current * year	Documentation Work Orders, Copy of agreement (MoU)	2 or More	2	I (2)
			1	1	
			No	0	
4	Whether Institute working as Examination Center/Deputing faculty to Exam Center for MSBTE in immediately concluded exam.	MSBTE Orders	Yes	1	I (1)
			No	0	
5	Whether Institute Involved in RAC/ RRAC/ DC/PCDC activities of MSBTE in Last / current * academic year (RAC/RRAC/DC/PCDC has been given to the deserving Institutes as per need by MSBTE).	MSBTE Orders	2 or More than 2 Activities	3	I (3)
			One Activity	2	
			Faculty Deputed	1	
			No Activity	0	
6	Whether Institute is working as 'Project institute for Model answers' for MSBTE in last / current* academic year.	MSBTE Orders	Development Center	2	I (2)
			Services rendered	1	
			No	0	
7	Professional Activities (Magazine/ Technical Magazine/News Letter)	Physical Verification	Yes	2	D (2)
			No	0	
8	Institutional Membership of professional societies/ students chapters.	Physical Verification	Yes	2	I (2)
			No	0	
9	Mechanism of Student Feedback, Analysis and Corrective Action is adopted	Student Feedback, Documentation, Suggestion Box etc.	Yes	2	D (2)
			No	0	
10	Adoption of Performance Appraisal and Development System (PADS) for Faculty and Supporting Staff.	Physical Verification	Yes	1	I (1)
			No	0	





11	Implementation of Career Advancement Scheme (CAS)	CAS Documents verification	Yes	1	I (1)
			No	0	
12	Deputation of faculty for MSBTE Activities RAC /Controller/MSCIT Vigilance, etc.	Deputation/Office Orders	35% or more	4	I (4)
			15% To 34 %	2	
			Less Than 15%	0	
<b>F Efforts for faculty development and Industry involvement</b>					
1	Faculties deputed/sponsored for the improvement of academic qualification/Higher Education	Reliving Letter, Permission letter	2 or more	2	D (2)
			1 to 2	1	
			Nil	0	
2	MOUs with <u>Industry/Hospital/Community Pharmacy</u> for the participation in academic development of the institute	Documents of joint activities performed under active MoU in current academic year	4 or more	3	D (3)
			2 to 4	2	
			Less Than 2	0	
3	Industry expert's lectures involved in academic activities of institute during last / current* academic year.	Invitation Letter, Photographs, Video Shooting	3 or more	3	D (3)
			1 to 2	2	
			Nil	0	
4	Number of Industrial visits /Hospital Visits organised during last/ current* academic year.	Permission letter from industry, Photographs, Copy of circular for students. Students' Feedback	2 or More	3	D (3)
			1	2	
			Nil	0	
5	Faculties attended trainings for Soft skills, Content updation, Industrial trainings, Orientation Workshops etc. in last/ current* academic year.	Certificate of Participation	30% or more	3	D (3)
			10% to 29%	2	
			Less Than 10%	0	

<b>G Result and Placements</b>					
1	No. of Students passed in 1 <sup>st</sup> Division in final year.	Documentation; Result Analysis	60% or more	6	D (6)
			30% to 59%	4	
			Less than 30%	0	
2	Average result of final year of last 3 years	Documentation; Result Analysis	90% or more	5	D (5)
			60% to 89%	3	
			Less than 60%	0	
3	Programs conducted for personality development during last/current* year	Documentation, Photographs, expenditure vouchers (if applicable)	2 or more	3	D (3)
			1	2	
			Nil	0	





4	Participation in sports (IEDSSA)/ IPA/APTI for Pharmacy events	Certified Documents and Certificates	3 or more	3	D (3)
			1 to 3	2	
			Nil	0	
5	Campus Placement / Final year student admitted for higher education	Placement Record, Appointment Letters, Joining Letters / approved admitted list etc.	50% or more	5	D (5)
			10% to 49%	3	
			Less Than 10%	0	
6	Entrepreneurship Development Cell established	Physical verification	Yes	1	I (1)
			No	0	
7	Students Mentoring system (Professional guidance/ Career advancement /All - round development/ Course/Lab work specific, mentoring programs conducted) frequency of mentoring (Excluding Personality Development Programs)	Physical Verification	2 or more activities / year	2	I (2)
			1 activity / year	1	
			No activities	0	
8	Final Year pass outs going for self-employment	Alumni Record Details	10% or Above	2	D (2)
			5% To 9%	1	
			Less than 5%	0	
9	Students completing diploma program within stipulated period	Result analysis	More than 60%	5	D (5)
			30% To 59%	3	
			Less than 30%	0	
10	Percentage of Students Appeared for ESE (End Semester Exam) with respect to the actual enrollment.	Verification of Enrollment records & result analysis.	Above 90%	4	D (4)
			75% To 89%	2	
			Less than 75%	0	

<b>H Extracurricular Activities</b>					
1	Organizing Technical Quiz / Seminar / Paper Presentation /Project Competition event last /current* year	Event Leaflets, Expenditure details, Photographs, participant feedback, etc.	State Level Activity in association with Govt / MSBTE/Industry	2	D (2)
			Any other	1	
			No Activity	0	
2	Number of state/ national / international level awards won by the Institute in workshop /seminar/ conference/ project	Certificates	2 or more Awards	4	I (4)
			1 Award	2	



	competitions organised in association with industry/ Universities / MSBTE/ Government body during Last 2 years.		No	0	
3	Awards won by the Institute's student in workshop /seminar/ conference/ project competitions Organized by any other organizations during last 2 years.	Certificates	2 or more Awards	2	1 (2)
			1 Award	1	
			No	0	

<b>IV</b>	<b>Socio- Economic Criteria</b>				
<b>A</b>	<b>Alumni</b>				
1	Whether alumni association registered or not? If Yes give No. of past students registered.	Formation of Alumni, Records of registration for Alumni, Relevant Documents	Yes	1	1 (1)
			No	0	
2	Alumni meet Conducted once in a year?		Yes	1	1 (1)
			No	0	
3	Contribution by Alumni (Expert lectures/Placement support/Funding/Sponsorship etc.)		Yes	1	1 (1)
			No	0	
<b>B</b>	<b>Socio-Industry Involvement</b>				
4	Activities with respect to CEP programs / NSS/ Community Development Through Polytechnics (CDTP), PMKVY, CSR organized during last / current * year.	Event Leaflets, Expenditure details, Photographs, participant feedback, etc.	2 or more	2	1 (2)
			1	1	
			No	0	
5	Any other social activities – Earn and learn/ NSS/ NCC/ Community services/Student welfare etc.		2 or more	2	D (2)
			1	1	
			No	0	

\*- Last year is considered for FIRST monitoring and Current year is considered for SECOND monitoring of the respective year.

**Note:** 1. For Pharmacy Institutes, Criteria & Sub-criteria, observations & marks are highlighted in italics. All other Parameters remain same.

2. This revised pro-forma is applicable for Academic Monitoring of only AICTE approved diploma courses.



**PART - C**

**PROFORMA**



For AICTE Diploma Courses

wef - 2017-18

**Maharashtra State Board of Technical Education****TEACHING PLAN (TP)**

Academic Year:

Program:

Course:

Course Code:

Semester:

Name of Faculty:

Chapter No. (Allocated Hrs.)	CO (Mention Only Number)	UO (Mention Only Number)	Title/Details *	Plan (From – To & No. of Lectures.)	Actual Execution (From -To & No. of Lectures.)	Teaching Method/ Media	Remarks

(Name &amp; Signature of Faculty)

(Name &amp; Signature of HOD)

\*The Faculty is supposed to mention the details of Topic &amp; Subtopics.



**D-2**

For AICTE Diploma Courses

wef - 2017-18

**Maharashtra State Board of Technical Education**

**LABORATORY ASSIGNMENT / SHEET / JOB / PROJECT ACTIVITY PLANNING (LP)**

Academic Year: \_\_\_\_\_

Program: \_\_\_\_\_

Course: \_\_\_\_\_

Course Code: \_\_\_\_\_

Semester: \_\_\_\_\_

Name of Faculty: \_\_\_\_\_

Batch A / B / C

Sr. No	CO	PrO	Name of Experiment/ Assignment/Sheet/Job/Project Activity	Planned date		Actual Date	Remark
				From	To		

(Name & Signature of Faculty)

(Name & Signature of HOD)



For AICTE Diploma Courses

wef - 2017-18

**Maharashtra State Board of Technical Education**  
**PROGRESSIVE ASSESSMENT OF PRACTICALS**

Academic Year:

Program:

Course:

Course Code:

Semester:

Name of Faculty:

Roll No.	Enrolment No.	Exam Seat No.	Name of the student	Experiment / Job / Assignment / Sheet/Activity of Project (Marks out of 10 per experiment)												Total Marks out of (10 x No. of Expt.) ( )	PA Marks of Practical Converted According to T.E Scheme (Max Marks- )
				1	2	3	4	5	6	7	8	9	10	11	12		
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>												<b>6</b>	<b>7</b>

(Name & Signature of Faculty)

(Name & Signature of HOD)





**Maharashtra State Board of Technical Education****END SEMESTER EXAMINATION ASSESSMENT OF PRACTICAL  
(External /Internal)**

Academic Year:

Program:

Course:

Course Code:

Semester:

Name of Faculty:

Marks Max.

Marks Minimum

Date of Examination

<b>Enrolment No</b>	<b>Name of Student</b>	<b>Exam Seat No</b>	<b>Marks obtained in Oral / Practical Exam. As per T.E Scheme (Max Marks- )</b>
1	2	3	4

Name &amp; Signature of Internal Examiner

Name &amp; Sign External Examiner

Note - Any fractional marks should be rounded to next integer.



**D-5**

For AICTE Diploma Courses

wef - 2017-18

**Maharashtra State Board of Technical Education**

**PROGRESSIVE ASSESSMENT OF THEORY**

Academic Year:

Program:

Course:

Course Code:

Semester:

Name of Faculty:

Roll No.	Name of Student	Course Code & Name→		-----		(Max 20)	Micro project (Out of 10)		(Out of 30)
		Enrolment No.	Exam Seat no.	TS 1	TS 2	Average of 5 & 6	Performance in Group Activity (Out of 6) *	Individual Performance in Oral / Presentation (Out of 4)	Total Of (7+8+9)
1	2	3	4	5	6	7	8	9	10

(Name & Signature of Faculty)

(Name & Signature of HOD)

\* Refer Rubric in Annexure -1



## Maharashtra State Board of Technical Education

### ANALYSIS OF TERM END EXAMINATION RESULT

Program:

Examination: Summer/Winter \_\_\_\_\_

Semester:

Sr. No	Course Code	Name of Course	Passing Heads	Marks Obtained Lowest	Marks Obtained Highest	No. of Student appeared	No. of Student Passed	% Pass	% of students above 60%
			TH-ESE						
			TH-PA						
			PR-ESE						
			PR-PA						
			TH-ESE						
			TH-PA						
			PR-ESE						
			PR-PA						
			TH-ESE						
			TH-PA						
			PR-ESE						
			PR-PA						

(Name &amp; Signature of Academic Co-ordinator)

(Name &amp; Signature of HOD)



D-7

For AICTE Diploma Courses

wef - 2017-18

**Maharashtra State Board of Technical Education**

**DETAILS OF INDUSTRIAL VISIT/ VACATIONAL TRAINING**

Academic Year:

Program:

Sr. No.	Name of Industry & Contact Details	Semester	Course Name	Name of Coordinator	Date of Conduction of Activity	No. of Beneficiaries	Relevance to PO's & PEO's (only nos.)

(Name & Signature of Academic Co-ordinator)

(Name & Signature of HOD)



**Maharashtra State Board of Technical Education****DETAILS OF EXPERT LECTURE**

Academic Year:

Program:

Sr. No	Name of Expert & Contact Details	Topic	*Course Code & CO's Nos.	Sem ester	Name of Coordinator	Date of Conduction of Activity	No. of Beneficiaries	Relevance to PO's & PEO's

(Name &amp; Signature of Academic Co-ordinator)

(Name &amp; Signature of HOD)

\*CO No. related to the concerned activity.



**Maharashtra State Board of Technical Education**

**DETAILS OF PLACEMENT**

Academic Year:

Program:

Sr. No	Name of Industry & Contact Details	No. of Students Placed	Salary Offered

(Name & Signature of TPO)

(Name & Signature of HOD)





For AICTE Diploma Courses

wef - 2017-18

**D-10**

**Maharashtra State Board of Technical Education**

**DETAILS OF FACULTY / STAFF TRAINING**

Academic Year:

Program:

Sr. No	Name of Faculty/Staff	Details of Training (Industrial / Content Updating / Soft Skill / Any Other)	Duration of Training (Schedule)	Organizing Body	Organizing Institute	Relevance with PEO's, PO's & CO with Course Code (Only nos.)

(Name & Signature of Academic Co-ordinator)

(Name & Signature of HOD)

**Note-** Faculty/Staff undergone training should transfer the acquired knowledge to the departmental staff & students. The HOD/Principal should certify the activity conducted in this regard & maintain records as per MSBTE norms.



**Maharashtra State Board of Technical Education**

**DETAILS OF RESOURCES DEVELOPMENT  
(Laboratory / Infrastructure / Teaching Aids)**

Academic Year:

Program:

Sr. No	Details of Resource	Relevance to PEO's / PO's / CO's with Course Code (only nos.)	Budget Allocated	Budget Utilized

(Name & Signature of Academic Co-ordinator)

(Name & Signature of HOD)



**D-12**

For AICTE Diploma Courses

wef - 2017-18

**Maharashtra State Board of Technical Education**

**DETAILS OF CO-CURRICULAR ACTIVITY**

Academic Year:

Program:

Sr. No	Type of Activity & Details (Paper Presentation / Project / Quiz / etc.)	Date	Name of Participating Student	Organizing Body And Organizing Institute	Awards (Winner / Participation)	Level (State / National / etc.)	Relevance to PEO's / PO's / CO's with Course Code (only nos.)

(Name & Signature of Academic Coordinator)

(Name & Signature of HOD)



For AICTE Diploma Courses

wef - 2017-18

**Maharashtra State Board of Technical Education****DETAILS OF EXTRA-CURRICULAR ACTIVITY**

Academic Year:

Program:

Sr. No	Type of Activity & Details (Sports / Drama / Social / NSS / etc.)	Date	Name of Participating Student	Organizing Body And Organizing Institute	Awards (Winner / Participation)	Level (State / National / etc.)	Relevance to PEO's / PO's / CO's with Course Code (only nos.)

(Name &amp; Signature of Academic Coordinator)

(Name &amp; Signature of HOD)



**D-14**

For AICTE Diploma Courses

wef - 2017-18

**Maharashtra State Board of Technical Education**

**STUDENTS FEED BACK**

**(Head of the Department shall take the Feed Back at the End of Second Class Test)**

Academic Year:

Program:

Semester:

Date:

Sr. No	Name of Course (TH / PR)	Name of Faculty	Each Parameter to be Assessed on the Scale of 1 to 5 (1 – Lowest & 5 - Highest)					Total (Max 25)
			Punctuality & Discipline	Domain Knowledge	Presentation Skill & Interaction with Students	Ability to Resolve Difficulties	Effective Use of Teaching Aids	
1								
2								
3								
4								
5								

**(Name & Signature of HOD)**



For AICTE Diploma Courses

wef - 2017-18

**Maharashtra State Board of Technical Education****Facilities Available in the Department**

Provide the details of the facilities & Specifications of Major / Essential Equipment's available for conduction of practical as per curriculum

Sr. No	Name of Laboratory	Semester wise Course Codes assigned to this Lab	Details of the Facility / Equipment Available	Quantity	Total Cost

(Name &amp; Signature of HOD)





## ANNEXURE I

### Suggestive Rubric for Evaluation of a Micro Project

Case Study- Rubric Used for Evaluation of Micro Project in the area of Carpentry

**Note:** 1) Every Faculty Member Should Develop a Customized Rubric for Evaluation of Respective Micro Project.

2) In Case more than one faculty member is associated with same course, it is expected to have a common Rubric for Evaluation)

Criteria	Indicators for different level of performance (Evaluation Scale-1to6)		
	Poor (1-2)	Average (3-4)	Good (5-6)
<b>Shape</b>	Prepared job is not in shape as per the sketch. The deviation is considerable	Prepared job resembles in shape to the given sketch to a great extent	Prepared job resembles exactly to the shape of the given sketch
<b>Dimensions</b>	<ul style="list-style-type: none"> <li>i) Most of the dimension are not matching with sketch</li> <li>ii) Holes are off centre</li> </ul>	<ul style="list-style-type: none"> <li>i) Most of the dimension are either just in tolerance limits or marginally out of tolerance limit</li> <li>ii) Holes are nearly at given centre</li> </ul>	<ul style="list-style-type: none"> <li>i) Most of the dimensions are well within tolerance limit</li> <li>ii) Holes are exactly at given centre</li> </ul>
<b>Surface finish / workmanship</b>	<ul style="list-style-type: none"> <li>i) Surface is rough</li> <li>ii) There are dents and burrs</li> <li>iii) Threads are not clean</li> <li>iv) Curves/bends are not smooth</li> </ul>	<ul style="list-style-type: none"> <li>i) Surface is smooth</li> <li>ii) There are no dents or burrs</li> <li>iii) Threads are clean but not very sharp</li> <li>iv) Curves/bends are just smooth</li> </ul>	<ul style="list-style-type: none"> <li>i) Surface is very smooth</li> <li>ii) There are no dents and burrs</li> <li>iii) Threads are clean and sharp</li> <li>iv) Curves/bends are very smooth</li> </ul>
<b>Time taken</b>	<ul style="list-style-type: none"> <li>i) Submitted after due date and time taken on machine/ in completing the procedure is quite more than specified.</li> </ul>	<ul style="list-style-type: none"> <li>i) Submitted within due date</li> <li>ii) Actual time taken on machine/ in completing the procedure is slightly more than specified.</li> </ul>	<ul style="list-style-type: none"> <li>i) Submitted within due date</li> <li>ii) Actual time taken on machine in completing the procedure is within limits.</li> </ul>
<b>Safety Concern</b>	<ul style="list-style-type: none"> <li>i) Most of the safety gadgets are not used when required.</li> <li>ii) Careless while handling electrical appliances.</li> <li>iii) Careless while working along with moving machine parts/ sharp tools</li> <li>iv) Ignores abnormal heating/ noise/ smell from work area</li> <li>v) Forgets use of coolant/ lubricant</li> </ul>	<ul style="list-style-type: none"> <li>i) Used most of the safety gadgets as and when required</li> <li>ii) Quite careful while handling electrical appliances</li> <li>iii) Quite careful while working with moving machine parts/ sharp tools</li> <li>iv) Shows concern for abnormal heating/ noise/ smell from work area</li> <li>v) Occasionally checks coolant lubricant wherever</li> </ul>	<ul style="list-style-type: none"> <li>i) All safety gadgets are used as and when required.</li> <li>ii) Very careful while handling electrical appliances</li> <li>iii) Very careful while working with moving machine parts/ sharp tools</li> <li>iv) Very vigilant about abnormal heating/ noise/ smell from work area</li> <li>v) Regularly checks coolant lubricant</li> </ul>



**ANNEXURE II**

**Evaluation Sheet for the Micro Project**

**Academic Year**

**Name of Faculty**

**Course:**

**Course Code:**

**Semester:**

**Title of the Project:** .....

**COs addressed by the Micro Project:**

- A. ....
- B. ....
- C. ....
- D. ....

**Major Learning Outcomes achieved by students by doing the Project:**

**(a) Practical Outcomes** .....

**(b) Unit Outcomes in Cognitive domain** .....

**(c) Outcomes in Affective Domain** .....

**Comments/Suggestions about team work/leadership/inter-personal communication (if any)**

.....

<b>Roll No.</b>	<b>Student Name</b>	<b>Marks out of 6 for performance in group activity (D5 Col. 8)</b>	<b>Marks out of 4 for performance in oral / presentation (D5 Col. 9)</b>	<b>Total out of 10</b>

**(Name & Signature of faculty)**



### ANNEXURE III

#### **Guidelines for Conduction of ESE part Practical Examination of course I.C.T. (Information & Communication Technology (220001))**

- It is a Computer based assessment.
- Examiner shall set the task for 25 marks.
- Candidate shall perform the task on Computer.
- Candidate shall save the file with his seat number of examination.
- Record of all candidate wise tasks done on computer appeared for examination to be saved in a Common folder. The name of folder should be as per given guidelines i.e.  
<Academic Year>\_<Subject Code>\_<Date of Exam>\_<Batch No.>  
For Example: - 16-17\_12456\_14/8/2017\_B1
- Preserve the folder as p.er MSBTE Examination rules.

