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CURRICULUM DELIVERY
Policy and Procedures

Content

"Learning is not attained by chance; it must be sought for with ardour and attended to with diligence."

Abigail Adams

1. INTRODUCTION

In simple terms, a syllabus is a document provided by the Board of Studies of a parent university. It is descriptive in nature containing the information about topics or portion of the course which needs to be covered for a particular subject in a fixed time period. The syllabus of a subject is considered as a guide of a particular course/ subject for respective students as well as teachers and it is provided at the beginning of the academic year. It also helps students to anticipate what are the learning expectations from them in that particular subject.

On the other hand, a curriculum is prescriptive in nature and it is basically a set of guidelines for different academic contents and chapters which are covered in a specific program offered by higher educational institutions. Curriculum typically refers to the attitude, manner, knowledge, behavior, performance and different skills that students are expected to learn in a holistic environment through interactions, experiences, planned and unplanned activities and events. In general, a curriculum is well planned and systematic steps, carefully designed by an educational institution which aims to focus on the overall learning experience provided by a course and emphasizes essentially on the overall development of the learners.

Curriculum delivery is a strategy adopted by college by which a curriculum enables students to achieve their learning goals. The stages involved in curriculum delivery are planning and support, teaching-learning developments as well as implementation and evaluation.

1.1 policy statement

Maulana Azad College of Arts, Science and Commerce, Roza bagh has well planned and sequenced policy for curriculum delivery which is coherent with the syllabus provided by Dr. Babasaheb Ambedkar Marathwada University, Aurangabad that ensures systematic planning,a well-organized support system, consistent monitoring of teaching-learning, developments, effective implementation and continuous evaluation.

The college has made the following commitments

1. To adopt the student-centric approach in curriculum delivery from teaching, learning and evaluation.
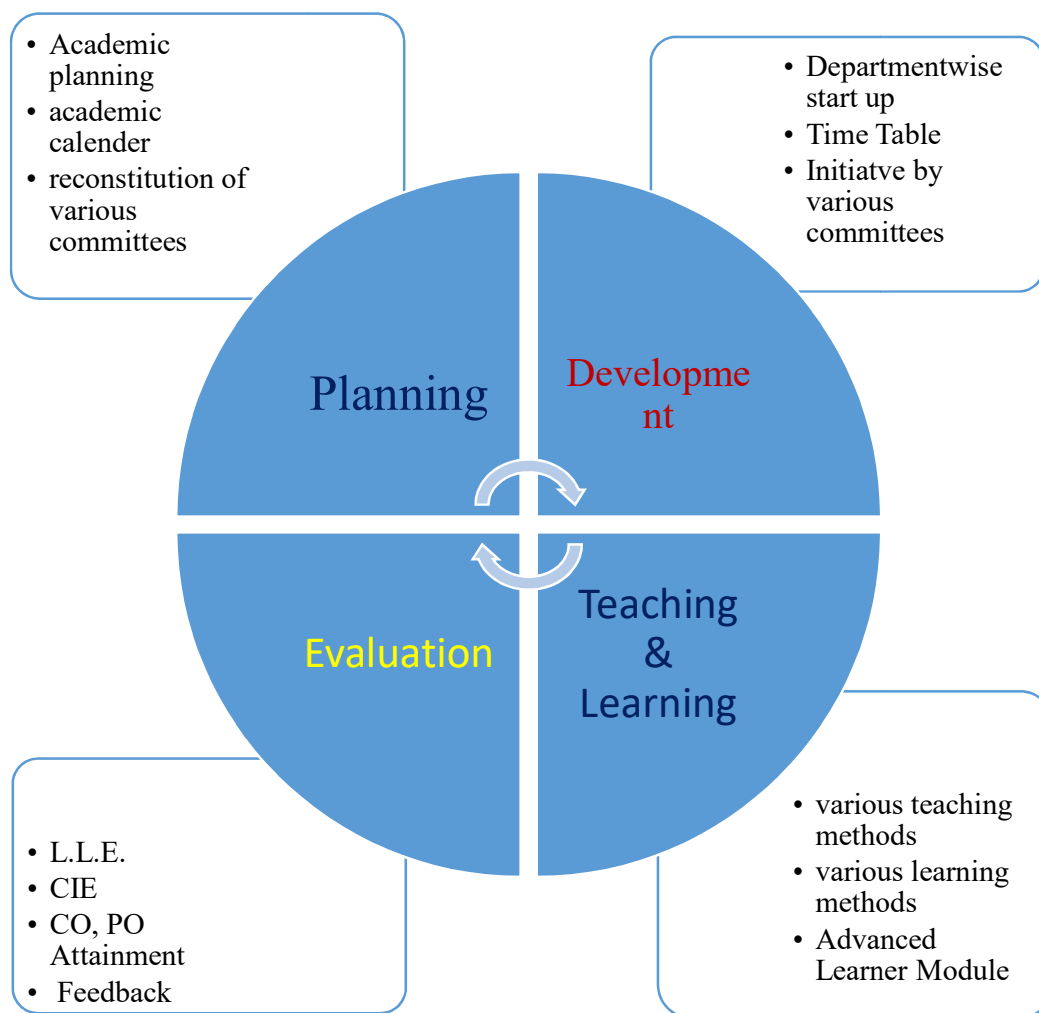
2.   To provide a systematic process of teaching, learning and evaluation and assure empowerment to the students which will fulfil curriculum expectations and potential of students.

3. To provide different learning methods suitable for the abilities of students.

4. To assure empowerment to the students appropriately so they meet curriculum expectations and fulfil their individual potential.

5. To ensure that learners are provided with a programme of study which best fulfils their current and future needs.

6. Effective assessment of learner's initial abilities and planning appropriate strategies accordingly for slow learners and advanced learners.

7. Formulation of mechanism for constructive feedback on assessment which will enable teachers to see whether learning outcomes are achieved or not.

8. Based on feedback provide effective guidance to needy learners that enables them to improve knowledge, competence and the professional skills necessary to support independent learning.

2. CURRICULUM DELIVERY STRATEGIES

In education, a curriculum is broadly defined as the set of student experiences that occur in the educational process. Maulana Azad College of Arts, Science and Commerce implements the syllabus designed by Dr. Babasaheb Ambedkar Marathwada University, Aurangabad. In order to ensure the effective curriculum delivery, the college has adopted a curriculum delivery strategy which is explained in Fig. 1. The college has a coherent, sequenced plan for curriculum delivery that ensures systematic planning, development, consistent teaching and learning and continuous evaluation procedures which has a clear reference for monitoring teaching and learning throughout the academic year.

- Academic planning
- academic calender
- reconstitution of various committees

- Departmentwise start up
- Time Table
- Initiatve by various committees

Planning

Development

Evaluation

Teaching & Learning

- L.L.E.
- CIE
- CO, PO Attainment
- Feedback

- various teaching methods
- various learning methods
- Advanced Learner Module

3. PLANNING

In this phase, the followings should be expected as a part of the planning

3.1 ACADEMIC PLANNING

The principal of the college organizes faculty meetings at the beginning of every academic year. In this meeting, entire staff comes together for the purpose of discussion and planning regarding the upcoming academic year. The principal and IQAC Coordinator are the facilitators of the future activities. The purpose of the meeting is to promote the participation of all faculty members through discussion. In general discussion about all the future college activities, requirements of teaching staff, and infrastructural and technological needs should be discussed and finalized for better and smooth conduction of academic activities.

Respective head of the departments should arrange departmental meetings with faculty members and finalize the following things

1) workload Distribution

2) To design measures for the effective implementation of curriculum.

3) To design an effective and systematic teaching plan of each course.

4) To design a plan for curriculum enrichment.

5) To plan for Continuation Internal Evaluation (CIE) containing LLE, Internal tests, advanced learner's module and remedial coaching.

6) To distribute responsibilities of all planned and unplanned departmental activities.

3.2 ACADEMIC COMMITTEE

The academic committee is constituted by The Principal and IQAC, which will take care of the entire educational program of the college. Since the proper timetable is a necessary instrument which helps for the efficient planning and also it provides an effective framework for the academic work of the college is to function. This committee also take care of the academic calendar of the college which will be aligned with the academic calendar provided by the parent university. The academic calendar is a tentative instrument designed by the academic committee which ensures all planned and unplanned activities, which are going to conduct by the college throughout the academic year well in advance.

Time table prepared by the academic committee helps all departments in the following:

1) timetable ensures smooth and sequential planning of curricular activities in advance.

2) time table helps teachers and students to know their roles and the available time to achieve their academic goals.

3) time table helps the head of the departments to distribute workload and also using it the Principal can keep track of teaching activities.

4) It helps students to plan their studies and other activities related to the curriculum.

5) It ensures equitable distribution of time to arrange all planned and unplanned academic activities, it directly aids discipline in the college to a great extent. The academic calendar is an instrument by which an institution defines the landmark dates and fixed time frame which helps with the daily work at college. An academic calendar is useful to keep students, teachers and supporting staff reminded of key dates and planned activities throughout the academic year.

3.3 ADMISSION COMMITTEE

The admission committee constituted by The principal takes care of the entire process of admission for the programs offered by the college. In the process of first-year admissions, all admissions should be done on a merit basis and must follow all protocols of reservations instructed by the government. The counseling cell is a part of the admission committee which would take care of those students who are facing difficulties to choose a proper program for their better future academic development. All types of technical help and support related admission process are provided to all students which are going to admit to our college without any cost. All the information on various government scholarships is provided to all students for the assistance of financially weaker students.

4. TEACHING AND LEARNING

Teaching and learning approaches are based on the following:

A classroom is a place bringing together students from different socioeconomic and educational backgrounds. For effective teaching and learning implementation, innovative strategies are required to meet students' individual needs. To improve teaching-learning environment teachers can adopt effective teaching strategies like

4.1. TRADITIONAL LECTURE METHODS

The aim of the traditional lecture method is to deliver course content directly through the chalk talk method. However, all teachers are advised to make these lectures effective by discussing with students and making them engaged in the classroom. Also advised to improve their verbal and non-verbal skills and make traditional lectures interesting.

4.2. PARTICIPATIVE LEARNING

This approach enables and empowers learners to share, analyze and enhance their knowledge of their life and conditions and to plan, act, monitor, evaluate and reflect. This includes a range of activities enabling the learners to play an active and influential part in decisions that affect their learning.

4.3. EXPERIENTIAL LEARNING AND FIELDWORK

The process of learning through experiences is called experiential learning, in which students learn by doing or reflecting on the experience. According to Kolb [1], the learner will get genuine from the experience when a learner has the following four abilities

1. The learner is willingly and actively involved in the experience.

2. The learner must be able to reflect and react to the experience.

3. The learner must possess and use analytical skills to conceptualize the experience.

4. The learner must possess decision making and problem-solving skills in order to use new ideas gained from the experience.

Experiential learning is executed through practical, study tours, project work, seminars, group discussion, and industrial visits.

4.4. TECHNOLOGY IN THE CLASSROOM AND LABORATORIES

To make learning student-centric, teaching using technology is a must. The following facilities are provided by the college to accomplish the goal.

Smart classrooms, LCD projectors, various software, INFLIBNET, Google Classroom, Teaching, YouTube are used in the process of teaching and learning.

5. ASSESSMENT AND EVALUATION

For the purpose of assessment and evaluation, the college has adopted Continuous Internal Evaluation (CIE) policy. The plan for CIE is given as follows:

1. Faculty shall conduct two MCQ tests on each paper of each semester.

a. Minimum 20 MCQs must be asked in the test.

b. After evaluation of answer paper, the question paper should be discussed with students.

c. Soft copy of question paper and mark list should be submitted through the Head of the department to the CIE committee.

d. The records should be kept in soft copy and hard copy in the department also.

e. If the performance of the students is not satisfactory in the tests taken, the faculty can take additional tests to ensure an improvement in their performance.

2. Faculty shall assign tutorials to the students for each course/paper of each semester.

a. There should be five descriptive and five short answer questions. (Faculty can change the format of the question paper given here as per requirement)

b. Instead of tutorials, the faculty can conduct an open book test also.

c. After evaluation of tutorial/open book test, the same must be discussed with the students.

d. Soft copy of question papers and mark lists in the given format should be submitted through the Head of the department to the CIE committee.

e. The records should be kept in soft copy and hard copy in the respective departments also.

3. Project work/ assignment /surveys should be given to the advanced learners, adequate learners and students having an interest in research work.

a. The concerned faculty should submit a detailed report which should include the student, title of project work etc. as per the attached format. The report should be routed through the Head of the department to the CIE committee.

4. Every faculty will be submitting 50 MCQs on each paper as per the attached format.

a. These MCQs will be further uploaded on our college website.

b. The records should be kept in soft copy and hard copy in the respective departments.

5. Faculty shall conduct the viva of students twice in a every semester.

a. Two to five questions should be asked to the student.

b. Date of the viva, photos should be documented.

c. Provide a document of any ten significant questions pertaining to that topic that was asked to the students.

d. The records should be kept in soft copy and hard copy in the respective departments.

6. Faculty should conduct the group discussion of students in every semester on the subject being taught, applied aspects etc. preferably under an external observer (college faculty/external faculty)

a. Record of participants in the attached format should be submitted to CTE committee through the Head of the department.

b. Documentary evidence in the form of title of the group discussion, inputs of students faculty/final observation of the observer should be submitted to CIE committee.

c. The records should be kept in soft copy and hard copy in the respective departments.

7. Learning levels evaluation

a. Learning levels evaluation (LLE) will be conducted by the faculties for every paper/semester before the commencement of teaching, so as to plan the conceptual teaching for each paper.

b. 10-20 MCQs may be taken for each test.

c. After evaluation of test, the topics of conceptual teaching along with analysis of the questions should be submitted to IQAC.

a. Faculty shall conduct course attainment test of each paper of every semester.

b. Course attainment test should be conducted after completion of syllabus but prior to the university examinations of every semester or as given in academic calendar.

c. Minimum three questions should be asked for each CO,

d. Soft copy of question paper and mark list should be submitted through the Head ofthe department to the CIE committee.

e. The records should be kept a soft copy and hard copy in the department also.

6. PROCEDURE FOR THE ATTAINMENT OF CO, PO, PSO

The college has adopted a systematic procedure to calculate the attainment of CO, PO, PSO. The departmental committee will finalize course outcomes for each course after the series of discussions with all the teachers of the department.

6.1 Procedure for the attainment of COs:

* Course outcomes will be attained through direct and indirect methods.
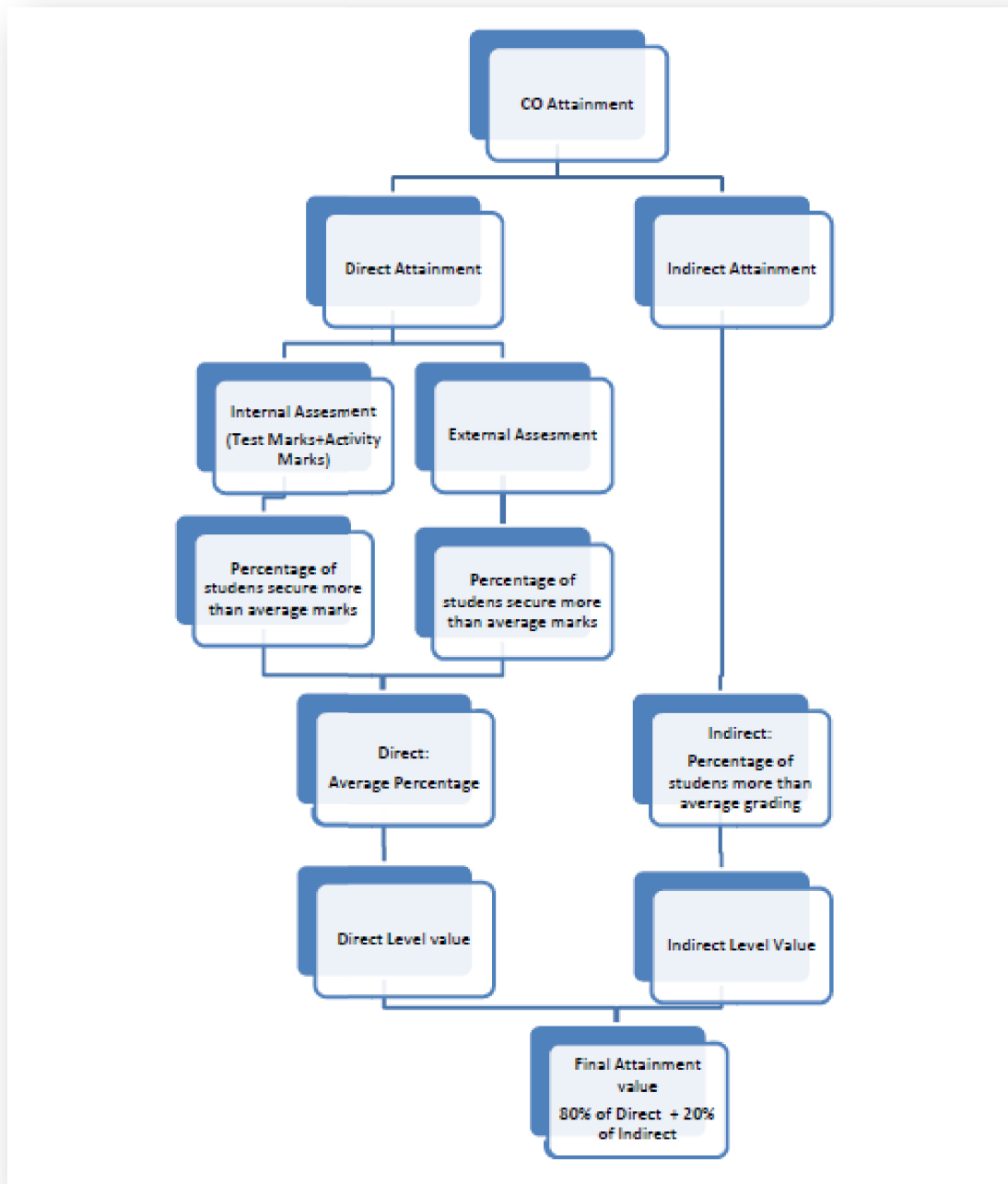
- **Direct Attainment**: We will consider the following criteria in the direct attainment
  - ♦ Two Internal tests will be conducted based on Cos.
  - ♦ Class performance activities consisting of assignments / tutorials/experiments/quiz/any other activity related to Cos will be conducted.
  - ♦ External exam marks will be considered.
- **Indirect Attainment**: In this method, we consider the feedbacks of students, parents, alumni and parents on the framed questionnaires.
  - ♦ A common format of programmed excel sheet will be used for finding the average attainment of Cos.
  - ♦ The following table shows the three target levels: Low, Moderate and High attainment for direct and indirect methods

Level	Average Percentage Level
1(Low)	41-50%
2 (Moderate)	51-60%
3 (High)	61% and above

  - ♦ Target level for attainment of Cos will be set based on average marks of that course in the previous academic year.

Attainment level for CO=80% of direct level+20% of indirect level

  - ♦ Attainment level of all course outcomes of a course will

be displayed in the following flow chart.

CO-PO Mapping:

Each Course outcome will be mapped to one or more suitable POs

6.2. Procedure for the attainment of POs/PSOs:

♦ Program outcomes will be attained through direct and indirect methods. Direct Attainment: We will consider all the courses which are mapped to a

particular PO. Then the direct attainment value will be calculated based on

the following formula:

$$Direct\ PO\ Attainment = \frac{Some\ of\ the\ average\ attainment\ level\ of\ CO\ mapped\ to\ PO}{Total\ Number\ of\ Courses}$$

♦ Indirect Attainment: In this method, we consider the feedbacks of students,parents,alumni andparentson the framed questionnaires.

♦ Final PO attainment = 80% of Direct attainment + 20% Indirect attainment

♦ The following table shows the five target levels:

Level	PO attainment range
1 (Poor)	0.5<= PO attainment value < 1
2(Average)	1<= PO attainment value < 1.5
3(Good)	1.5<= PO attainment value < 2
4(Very Good)	2<= PO attainment value < 2.5
5(Excellent)	2.5<= PO attainment value <=3

♦ Target levels for attainment of POs/PSOs will be set based on the performance of the previous year.

♦ Same procedure will be used for obtaining attainment of PSOs.

1. **Procedure for attainment of Programme Educational Outcomes (PEOs):**

♦ We map POs and PSOs with suitable PEOs.

♦

$$Direct\ PEO\ Attainment = \frac{Sum\ of\ the\ Attainmet\ level\ of\ PO\ and\ PSO\ mapped\ to\ PEO}{Total\ number\ of\ PO\ and\ PSO}$$

♦ Indirect attainment of PEOs is based on the feedbacks of students, parents, alumni and teachers on the framed questionnaires.

♦ Final PEO attainment= 80% of Direct attainment + 20% Indirect attainment

♦ Attainment of Mission is calculated by mapping PEO's with the Mission statements and assigning the scores.

♦ The achievement of vision is evaluated on the basis of Mission attainment values.

6.2 CO-PO Mapping

The sample of CO- PO Mapping, Sample Calculation of CO PO attainment are shown below

Course Name and code	CO/PO	PO1	PO2	PO3	PO4	PO5
Group Theory MAT501	CO1	✓	✓		✓	✓
	CO2	✓		✓		✓
	CO3	✓	✓			✓
	CO4	✓	✓	✓	✓	
Real Analysis MAT502	CO1		✓			✓
	CO2	✓		✓		✓
	CO3		✓			
	CO4	✓	✓	✓		
Complex Analysis MAT503	CO1	✓	✓		✓	✓
	CO2	✓		✓		✓
	CO3		✓			✓
	CO4	✓	✓	✓	✓	
Ordinary Differential Equations MAT504	CO1	✓	✓			✓
	CO2			✓		✓
	CO3	✓	✓			
	CO4	✓	✓	✓		

Advanced Discrete Mathematics MAT505	CO1	✓	✓			✓	✓
	CO2	✓		✓			✓
	CO3		✓				✓
	CO4	✓	✓	✓	✓		
Introduction to Probability MAT506	CO1		✓				✓
	CO2	✓		✓			✓
	CO3	✓	✓				
	CO4	✓	✓	✓			

CO Attainment of a course

	Internal Average	External Average	Direct	Level	Indirect	Level	Attainment 80% of Direct + 20%of indirect
CO1	53.57	62	57.785	2	70	3	2.2
CO2	55	62	58.5	2	85	3	2.2
CO3	60	62	61	3	90	3	3
CO4	63	62	62.5	3	65	3	3
	Group Theory Course outcome Attainment						2.6

CO attainment verification

Course Name	Course code	CO Target Level	CO attainment Level	Fully attained Or not	Action taken
Group Theory	MTU101	2	2.6	Fully attained	
Real Analysis	MTU102	2	2.4	Fully attained	
Complex Analysis	MTU103	2	2.5	Fully attained	
Ordinary Differential Equations	MTU104	3	2.8	Not attained	More focus on end term examination
Advanced Discrete Mathematics	MTU105	3	2.4	Not attained	Set the target level to 2
Introduction to Probability	MTU106	2	2.2	Fully attained	

PO attainment verification

PO's	PO Target Level	PO attainment Level	Fully Attained or not	Action taken
PO1	4	2.55	Fully Attained	
PO2	5	2.53	Fully Attained	
PO3	4	2.54	Fully Attained	
PO4	4	2.74	Fully Attained	Set higher level
PO5	5	2.42	Not attained excellent but reached to very good	

Program Educational Objectives:

PEO's	PEO Target Level	PEO attainment Level	Fully attained or not	Action taken
PEO1	2			
PEO2	3			
PEO3	2			
PEO4	3			
PEO5	3			

7. FEEDBACK MECHANISM

Feedback from Faculty, Students, Alumni, Employers and Academic Peers is important to judge effectiveness of the curriculum. The college will collect feedback from all these stakeholders. The feedback on respective courses and programs will be analyzed by the concerned departments The detailed reports will be made and wherever necessary conveyed to Board of Studies members in workshops conducted for revision of curriculum The outcome of parents-teacher meetings as well as the report from the administration will also be taken into consideration while forwarding suggestions to the BOS

The policy ensures the following

- Stakeholders have the opportunity to provide feedback, including current students, and current staff. Alumni, industry partners, academic peers, community groups and other interest groups.
- Feedback can be provided by individuals on their initiative or in response requests by the College.
- Feedback processes will be systematic, rigorous and respectful of the rights students, staff and other stakeholders.
- Feedback responses will be considered and, where appropriate. enacted in a timely manner.
- Protection of privacy and reputation of all stakeholders involved.
- Mechanisms for providing feedback vary according to the needs of the College and stakeholder groups.
- Feedback shared with staff responsively and in sufficient detail that will allow staff sufficient information to reflect fully on their capacity to promote the principal of excellent teaching.

8. REFERENCES

[1] **Kolb D.**, "Experiential Learning: Experience as the source of learning and development"; Englewood Cliffs, NJ: Prentice-Hall. 1984.

[2] **Anne Fox, M. Hackermen, "**Evaluating and Improving undergraduate teaching in Science, Technology, Engineering and Mathematics", The National Academic Press, Washington DC (2003).