



**VELAGAPUDI RAMAKRISHNA
SIDDHARTHA ENGINEERING COLLEGE**

(Autonomous)

Kanuru, Vijayawada – 520 007

(Approved by AICTE, Accredited by NAAC with 'A' Grade and ISO 9001: 2008 Certified)

(Affiliated to Jawaharlal Nehru Technological University, Kakinada)

Academic Regulations for MCA (MCA15) w. e. f: 2015-2016

1. Introduction
2. Definitions
3. Duration of the Programme
4. Minimum Instruction Days
5. Eligibility Criteria for Admission
6. Programme Structure
7. Medium of Instruction
8. Syllabus
9. Eligibility Requirement for appearing Semester End Examination and Condonation
10. Examinations and Scheme of Evaluation
11. Conditions for Pass and Award of Degree
12. Readmission Criteria
13. Break in Study
14. Eligibility for award of Degree
15. Conduct and Discipline
16. Malpractices
17. Other Matters
18. Amendments to Regulations

1. INTRODUCTION

Academic Programmes of the College are governed by rules and regulations as approved by the Academic Council, which is the highest Academic body of the College. These academic rules and regulations are effective from the academic year 2015-16, for students admitted into three year postgraduate programme offered by the college leading to Master of Computer Applications (MCA)

The regulations listed under this head are for MCA programme, leading to award of MCA degree, offered by the college with effect from the academic 2015-16 and they are called as “MCA15” regulations.

The regulations here under are subjected to amendments as may be made by the Academic Council of the college from time to time, keeping the recommendations of the Board of Studies in view. Any or all such amendments will be effective from such date and to such batches of candidates including those already undergoing the programme, as may be decided by the Academic Council.

2. DEFINITIONS

- a) “Commission” means University Grants Commission (UGC)
- b) “Council” means All India Council for Technical Education (AICTE)
- c) “University” means Jawaharlal Nehru Technological University Kakinada, Kakinada (JNTUK)
- d) “College” means Velagapudi Ramakrishna Siddhartha Engineering College (VRSEC)
- e) “Programme” means any combination of courses and/or requirements leading to award of a degree
- f) “Course” means a subject either theory or practical identified by its course title and code number and which is normally studied in a semester.
- g) “Degree” means an academic degree conferred by the university upon those who complete the postgraduate curriculum.

3. DURATION OF THE PROGRAMME

The duration of the programme is three academic years consisting of six semesters. A student shall be declared eligible for the award of MCA degree, if he pursues a course of study and completes it successfully for not less than three academic years and not more than six academic years. A student who fails to fulfill all the academic requirements for the award of the degree within six academic years from the year of their admission, shall forfeit his seat in MCA course.

4. MINIMUM INSTRUCTION DAYS

Each semester, normally consists of a minimum of 90 instruction days with about 25 to 35 contact periods per week.

5. ELIGIBILITY CRITERIA FOR ADMISSION

The eligibility criteria for admission into MCA programme as per the guidelines of Andhra Pradesh State Council of Higher Education (APSCHE).

5.1 CATEGORY – A Seats:

These seats will be filled by the Convener, APICET Admissions.

5.2 CATEGORY – B Seats:

These seats will be filled by the College as per the guidelines of Andhra Pradesh State Council of Higher Education (APSCHE).

6. PROGRAMME STRUCTURE

Every course of MCA programme will be placed in one of the following categories listed in Table1.

Table1: Categories of Courses

S.No	Courses
1	Humanities, Mathematics and Social Sciences Courses: The total numbers of credits are 18 under this category.
2	Professional Courses: The total numbers of credits are 104 under this category.
3	Self-Learning Courses: The self-learning course shall be opted from the list of approved MOOCs by the Board of Studies. The course under this category shall carry 2 credits.
4	Mini Project and Major Project: The total numbers of credits are 17 under this category.
5	Personality Development Courses: To complete this course the candidate should get either 75 percentage of attendance or 50 percentage of marks in the semester end examination in both the courses offered in second year under this category. If the candidate fails, he/she can repeat the semester end examination after one month. The semester end examination will be conducted and evaluated by the concerned faculty. The total numbers of credits are 2 under this category.

6.1 COURSE CODE AND COURSE NUMBERING SCHEME

Course Code consists of nine characters which includes digits and alphabets.

A typical course code is illustrated in the following Figure 1:

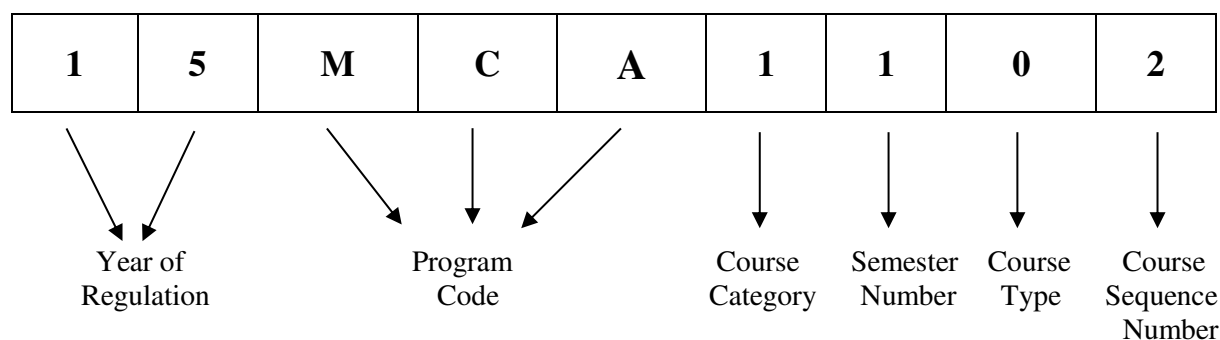


Figure 1: Course Numbering Scheme

- First two digits are described in Table 2.

Table 2: First Two Digits description

First Two Digits	Description
15	Year of Regulation

- Third to Fifth character is described in Table 3.

Table 3: Third to Fifth Character description

Third to Fifth Character	Program Description
MCA	Department of Computer Applications

- Sixth character represents course category as described in Table 1 above.
- Seventh character represents semester of offering as described in Table 4.

Table 4: Sixth Character description

Sixth Character	Description
1	First Semester
2	Second Semester
3	Third Semester
4	Fourth Semester
5	Fifth Semester
6	Sixth Semester

- Eighth character represents course type as mentioned in Table 5.

Table 5: Course type description

Eighth Character	Description
0	Theory course
5	Lab course

- Ninth character represents course sequence number.

6.2 SCHEME OF INSTRUCTION

The scheme of instruction and syllabi of MCA programme is given separately.

6.3 CONTACT HOURS AND CREDITS

Credit means quantifying and recognizing learning. Credit is measured in terms of contact hours per week in a semester. The Course Credits are broadly fixed based on the following norms:

- Lectures – One lecture period per week is assigned one credit.
- Tutorials – Two tutorial periods per week are assigned one credit.
- Practical – Two periods per week is assigned one credit.
- Mini Project shall have two credits.

- Major project shall have fifteen credits.
- However, some courses are prescribed with fixed number of credits depending on the subject complexity and importance.

6.4 THEORY / TUTORIAL CLASSES

Each course is prescribed with fixed number of lecture periods per week. During lecture periods, the course instructor shall deal with the concepts of the course. For certain courses, tutorial periods are prescribed, to give exercises to the students and to closely monitor their learning ability.

6.5 LABORATORY CLASSES

A minimum of 75% of prescribed number of experiments have to be performed by the students, who shall complete these in all respects and get the record certified by the concerned Head of the Department.

6.6 PROGRAMME CREDITS

MCA programme is designed to have a total of 143(141+2) credits, the breakup for which is 141 Academic credits and 2 for Soft Skills(Personality Development Courses). The student shall have to complete the courses and earn total 143(141+2) credits for the award of degree.

7 MEDIUM OF INSTRUCTION

The medium of instruction and examination is English.

8 SYLLABUS

As approved by the concerned BOS and Academic Council.

9 ELIGIBILITY REQUIREMENT FOR APPEARING SEMESTER END EXAMINATION AND CONDONATION

- 9.1** Regular course of study means a minimum average attendance of 75% in all the courses computed by totaling the number of periods of lectures, tutorials, practicals and personality development courses as the case may be, held in every course as the denominator and the total number of periods attended by the students in all the courses put together as the numerator.
- 9.2** Condonation of shortage in attendance may be recommended by respective Head of the Department on genuine medical grounds, provided the student puts in at least 65% attendance as calculated above and provided the Principal is satisfied with the genuineness of the reasons and the conduct of the student.
- 9.3** Students, having shortage of attendance shall pay Rs.20/- per every period of attendance shortage subject to a minimum of Rs.500/-.

9.4 Minimum of 50% aggregate marks must be secured by the candidates in the internal examinations conducted for theory, lab and project courses to be eligible to write semester end examinations. However, if the student is eligible for promotion based on the attendance, in case necessary, a shortage of internal marks up to a maximum of 10% may be condoned by the Principal based on the recommendations of the Heads of the Department.

9.5 Students having shortage of internal marks up to a maximum of 10% shall have to pay requisite fee towards condonation.

9.6 A student, who does not satisfy the attendance and/or internal marks requirement, shall have to repeat that semester.

9.7 Eligible candidates who failed to register for all papers for the semester-end examinations shall not be permitted to continue the subsequent semester and has to repeat the semester for which he/she has not registered for semester end examinations.

10 EXAMINATIONS AND SCHEME OF EVALUATION

The performance of the candidate in each semester shall be evaluated subject-wise, with a maximum of 100 marks for theory and 100 marks for Laboratory, on the basis of Continuous Evaluation and Semester End Evaluation.

10.1 INTERNAL EXAMINATIONS

10.1.1 Theory Courses:

Each course is evaluated for **40** marks (a+b).

- a) The internal evaluation shall be made based on the two midterm examinations each for **20** marks will be conducted in every theory course in a semester. The midterm marks shall be awarded giving a weight-age of $2/3^{\text{rd}}$ in the examination in which the student scores more marks and $1/3^{\text{rd}}$ for the examination in which the student scores less marks. Each midterm examination shall be conducted for the duration of 90 minutes.
- b) The remaining **20** marks are awarded through continuous evaluation of comprehensive assignments in each subject as notified by the teacher at the beginning of the semester.

Students shall be informed regarding the comprehensive assignment during first week of semester and they have to submit completed assignment on or before 12th week of semester. Comprehensive assignment Marks Distribution is shown in Table 6.

Table 6: Comprehensive assignment Marks Distribution

S. No	Criteria	Marks
1	Report	10
2	Presentation & Viva – Voce	10

10.1.2 Laboratory Courses:

For Laboratory courses there shall be continuous evaluation during the semester for **40** internal marks. The distribution of internal marks is shown in Table 7.

Table 7: Laboratory Internal Marks Distribution

S. No	Criteria	Marks
1	Continuous Assessment	10
2	Record	10
3	Internal Examination	20

10.1.3 Self-Learning Courses:

For the courses under this category, there shall be continuous evaluation for 40 marks and semester end examination of 60 marks. The distribution of marks for continuous evaluation will be same as theory courses 10.1.1.

10.1.4 Mini Project:

The continuous internal evaluation for **40** marks allocated for the project work in the fifth Semester shall be on the basis of two reviews by each student on the topic of his/her project evaluated by Project Review Committee and continuous assessment by the project supervisor. The Project Review Committee (PRC) consists of Head of Department, respective project supervisor and a senior faculty member of the department. The distribution of marks is shown in Table 8.

Table 8: Mini Project Internal Marks Distribution

S. No	Criteria	Marks
1	Continuous Assessment	10
2	Two Reviews	15+15

10.1.5 Major Project:

The continuous internal evaluation for **40** marks allocated for the project work in the Sixth Semester shall be on the basis of three (3) reviews by each student on the topic of his/her project evaluated by Project Review Committee and continuous assessment by the project supervisor. The Project Review Committee consists of Head of Department, respective project supervisor and two senior faculty members of the department. The distribution of marks is shown in Table 9.

Table 9: Major Project Internal Marks Distribution

S. No.	Criteria	Marks
1	Continuous Assessment	10
2	Three Reviews	10+10+10

10.1.5 Personality Development Course:

The distribution of internal evaluation for **40** marks is shown in Table 10.

Table 10: Personality Development Course Internal Marks Distribution

S. No.	Criteria	Marks
1	Arithmetic Reasoning	30
2	Verbal Reasoning	10

10.2 SEMESTER END EXAMINATIONS**10.2.1 Theory Courses:**

Each course is evaluated for 60 marks. The Semester end examinations shall be conducted for 3 hours duration. The question paper shall be given in the following pattern.

Part –A: Shall contain 8 questions of one mark each. A minimum of two Questions will be given from each unit of the syllabus out of four units.

Part –B: There shall be two questions from each unit with internal choice. Each question carries 13 marks. Each course shall consist of four units of syllabus.

10.2.2 Laboratory Courses:

For Laboratory courses evaluation is for 60 marks. The distribution of external marks is shown in Table 11.

Table 11: Laboratory External Marks Distribution

S. No	Criteria	Marks
1	Procedure	20
2	Program Execution	15
3	Result Analysis/Inference	10
4	Viva-Voce	15

10.2.3 Self-Learning Courses:

The semester end examinations for courses under this category are evaluated for 60 marks. The question paper shall be set as described in 10.2.1 by the faculty nominated by the Head of the Department and the same is to be given to the controller of examinations. The evaluation of the semester end examination will be carried by the faculty nominated by the Head of the Department.

10.2.4 Mini Project: 60 Marks

The distribution of Semester End Examination marks for mini project is shown in Table 12. The semester end examination shall be evaluated by the PRC.

Table 12: Mini Project External Marks Distribution

S. No	Criteria	Marks
1	Report	30
2	Project Demonstration	30

10.2.5 Major Project:

The work on the project shall be initiated in the VI Semester and the duration of the project is for one semester. A candidate shall be allowed 4 weeks of time to get his/her project problem definition(abstract)approved by the Project Review Committee (PRC) and registered. A candidate shall be allowed to submit the project report only with the approval of Project Review Committee (PRC) and not earlier than 15 weeks from the day of registration of the project work. Every candidate shall be required to submit thesis or dissertation after taking up a topic approved by the Project Review Committee.

- a) A Project Review Committee (PRC) shall be constituted with Head of the Department as chair person, project supervisor and two senior faculty members of the concerned department.
- b) A candidate has to submit, in consultation with his project supervisor, the title, objective and plan of action of his project work to the Project Review Committee for its approval. After obtaining the approval of the Committee, the student can initiate the Project work.
- c) If a candidate wishes to change his supervisor or topic of the project he can do so with approval of the PRC. However, the Project Review Committee (PRC) shall examine whether the change of topic/supervisor leads to a major change of his initial plans of project proposal. If so, his date of registration for the project work starts from the date of change of Supervisor or topic as the case may be.
- d) A candidate shall submit status report in three stages. Each status report should be submitted at the end of every five weeks from the day of registration. The final report should be submitted in the form of draft copy of thesis for the approval of PRC to the Head of the Department and shall make an oral presentation before the PRC at the end of Sixth semester.
- e) Two copies of the Project Thesis certified by the supervisor shall be submitted to the College.
- f) The thesis shall be adjudicated by one external examiner selected by the Principal. For this, Head of the Department shall submit a panel of three examiners, who are eminent in the field.

g) The viva-voce examination shall be conducted by a board consisting of the Head of the Department, External examiner and respective project supervisor. The semester end evaluation shall be for 60 marks. Head of the Department shall coordinate and make arrangements for the conduct of viva-voce examination. If any candidate gets less than 50% marks in the viva-voce examination, he/she shall revise and resubmit the project work and reappear for viva-voce examination when next conducted.

In a special case, if the candidate is not submitted his/her thesis due to ill health or any other reason permitted by the head of the institution, he/she will be given a chance to attend for the viva-voce examination conducted separately at a later date, if the expenditure for conducting the viva-voce is completely borne by the candidate.

10.2.6 Personality Development Course:

The distribution of Semester End Examination marks for Personality Development Course is shown in Table 13.

Table 13: Personality Development Course External Marks Distribution

S. No.	Criteria	Marks
1	Logical Reasoning	30
2	Verbal Reasoning	10
3	Viva-Voce	20

11. CONDITIONS FOR PASS AND AWARD OF DEGREE

11.1 CONDITIONS FOR PASS AND AWARD OF GRADES & CREDITS:

- a) A candidate shall be declared to have passed in individual Theory course if he/she secures a minimum of 50% aggregate marks (Internal & semester end examination marks put together), subject to a minimum of 40% marks in semester end examination.
- b) A candidate shall be declared to have passed in individual lab/project course if he/she secures a minimum of 50% aggregate marks (Internal & semester end examination marks put together), subject to a minimum of 50% marks in semester end examination.
- c) If a candidate secures minimum of 40% marks in Theory Courses in the semester end examination and 40% - 49% of the total marks in the semester end examination and internal evaluation taken together in some theory courses and secures an overall aggregate of 50% in all theory courses of that semester he/she declared to be passed in the theory courses of that semester in regular examination. This provision is applicable for regular candidates only during Regular Semester End Examinations.

- d) The candidate has to pass the failed course by appearing the examination when offered next as per the requirement for the award of degree.
- e) On passing a course of a programme, the student shall earn assigned credits in that course.

11.2 METHOD OF AWARDING LETTER GRADES AND GRADE POINTS FOR A COURSE

A letter grade and grade points will be awarded to a student in each course based on his/her performance as per the grading system as shown in Table 14.

Table 14: Grading System for Individual Theory/Lab/Project:

Theory	Lab/Project	Grade Points	Letter Grade
90% and above	90% and above	10	Ex
80 to < 90%	80 to < 90%	9	A+
70 to < 80%	70 to < 80%	8	A
60 to < 70%	60 to < 70%	7	B
50 to < 60%	55 to < 60%	6	C
45 to < 50%	50 to < 55%	5	D
40 to < 45%	--	4	E
< 40%	< 50%	0	F (Fail)
ABSENT	ABSENT	0	AB

11.3 CALCULATION OF SEMESTER GRADE POINTS AVERAGE (SGPA)* AND AWARD OF DIVISION FOR THE PROGRAM

The performance of each student at the end of the each semester is indicated in terms of SGPA. The SGPA is calculated as below:

$$\text{SGPA} = \frac{\sum (\text{CR} \times \text{GP})}{\sum \text{CR}} \quad (\text{for all courses passed in semester})$$

Where CR= Credits of a course

GP = Grade points awarded for a course

*SGPA is calculated for the candidates who passed all the courses in that semester.

11.4 CALCULATION OF CUMULATIVE GRADE POINT AVERAGE (CGPA) FOR ENTIRE PROGRAMME.

The CGPA is calculated as below:

$$\text{CGPA} = \frac{\sum (\text{CR} \times \text{GP})}{\sum \text{CR}} \quad (\text{for entire programme})$$

Where CR= Credits of a course

GP = Grade points awarded for a course

11.5 AWARD OF DIVISION

The award of division for MCA programme for the candidates who were admitted into MCA in the year 2015-16 and onwards as shown in the Table 15.

Table 15: Criteria for the Award of Division

CGPA	DIVISION
≥ 7.75	First Class with Distinction
$\geq 6.5 - < 7.75$	First Class
$\geq 5.5 - < 6.5$	Second Class
$\geq 4 - < 5.5$	Pass class
< 4	Fail

- For the purpose of awarding First Class with Distinction CGPA obtained within 3 years – candidates admitted through APICET and Management Quota.
- Detained and break-in study candidates are not eligible for the award of First Class with Distinction.
- For the purpose of awarding First, Second and Pass Class, CGPA obtained in the examinations appeared within the maximum period allowed for the completion of course shall be considered.

11.6 TRANSITORY REGULATIONS

A candidate, who is detained or discontinued in the semester, on readmission shall be required to pass all the courses in the curriculum prescribed for such batch of students in which the student joins subsequently and the academic regulations be applicable to him/her which have in force at the time of his/her admission. However, exemption will be given to those candidates who have already passed in such courses in the earlier semester(s) and additional subjects are to be studied as approved by Board of Studies and ratified by Academic Council.

12. READMISSION CRITERIA

A candidate, who is detained in a semester due to lack of attendance/marks, has to obtain written permission from the Principal for readmission into the same semester after duly fulfilling all the required norms stipulated by the college in addition to paying an administrative fee of Rs. 1,000/-

13. BREAK IN STUDY

Student, who discontinues the studies for what so ever may be the reason, can get readmission into appropriate semester of MCA programme after break-in study only with the prior permission of the Principal of the College provided such candidate shall follow the

transitory regulations applicable to such batch in which he/she joins. An administrative fee of Rs.2000/- per each year of break in study has to be paid by the candidate to condone his/her break in study.

14. ELIGIBILITY FOR AWARD OF DEGREE

The MCA Degree shall be conferred on a candidate who has satisfied the following requirement.

- A student should register himself for 143(141+2) credits and should obtain all the 143(141+2) credits in order to become eligible for the award of MCA Degree.

15. CONDUCT AND DISCIPLINE

- Students shall conduct themselves within and outside the premises of the College in a manner befitting the students of our College.
- As per the order of Honorable Supreme Court of India, ragging in any form is considered a criminal offence and is banned. Any form of ragging will be severely dealt with.
- The following acts of omission and/or commission shall constitute gross violation of the code of conduct and are liable to invoke disciplinary measures with regard to ragging.
 - i) Lack of courtesy and decorum; indecent behavior any where within or outside the campus.
 - ii) Willful damage or distribution of alcoholic drinks or any kind of narcotics to fellow students /citizens.
- Possession, consumption or distribution of alcoholic drinks or any kind of narcotics or hallucinogenic drugs.
- Mutilation or unauthorized possession of library books.
- Noisy and unseemly behavior, disturbing studies of fellow students.
- Hacking computer systems (such as entering into other person's areas without prior permission, manipulation and/or damage of computer hardware and software or any other cyber crime etc.
- Students are not allowed to use cell phones in the campus.
- Plagiarism of any nature is prohibited.
- Any other act of gross indiscipline as decided by the college from time to time.
- Commensurate with the gravity of offense, the punishment may be reprimand, fine, expulsion from the institute / hostel, debarment from a examination, disallowing the use of certain facilities of the Institute, rustication for a specified period or even outright

expulsion from the Institute, or even handing over the case to appropriate law enforcement authorities or the judiciary, as required by the circumstances.

- For an offence committed in (i) a hostel (ii) a department or in a class room and (iii) elsewhere, the Chief Warden, the Head of the Department and the Principal, respectively, shall have the authority to reprimand or impose fine.
- Cases of adoption of unfair means and/or any malpractice in an examination shall be reported to the Principal for taking appropriate action.
- Unauthorized collection of money in any form is strictly prohibited.
- Detained and Break-in-Study candidates are allowed into the campus for academic purposes only with permission from Authorities.
- Misconduct committed by a student outside the college campus but having the effect of damaging, undermining & tarnishing the image & reputation of the institution will make the student concerned liable for disciplinary action commensurate with the nature & gravity of such misconduct.
- The Disciplinary Action Committee constituted by the Principal, shall be the authority to investigate the details of the offence, and recommend disciplinary action based on the nature and extent of the offence committed.
- “Grievance appeal Committee” (General) constituted by the Principal shall deal with all grievances pertaining to the academic / administrative /disciplinary matters.
- All the students must abide by the code and conduct rules of the college.

16. MALPRACTICES

- The Principal shall refer the cases of malpractices in internal assessment tests and Semester-End Examinations, to a Malpractice Enquiry Committee, constituted by him/her for the purpose. Such committee shall follow the approved scales of punishment. The Principal shall take necessary action, against the erring students basing on the recommendations of the committee.
- Any action on the part of candidate at an examination trying to get undue advantage in the performance or trying to help another, or derive the same through unfair means is punishable according to the provisions contained hereunder. The involvement of the Staff, who are in charge of conducting examinations, valuing examination papers and preparing/keeping records of documents relating to the examinations in such acts (inclusive of providing incorrect or misleading information) that infringe upon the course of natural justice to one and all concerned at the examination shall be viewed seriously and recommended for award of appropriate punishment after thorough enquiry.

17. OTHER MATTERS

- 17.1 The physically challenged candidates who have availed additional examination time during their Graduation/API CET examinations will be given additional examination time on production of relevant proof/documents.
- 17.2 Students who are suffering from contagious diseases are not allowed to appear either internal or semester end examinations.
- 17.3 The students who participated in coaching/tournaments held at state/National /International levels through University / Indian Olympic Association during end semester external examination period will be promoted to subsequent semesters till the entire course is completed as per the guidelines of University Grants Commission Letter No. F.1-5/88 (SPE/PES), dated 18-08-1994.
- 17.4 The Principal shall deal with any academic problem, which is not covered under these rules and regulations, in consultation with the Heads of the Departments in an appropriate manner, and subsequently such actions shall be placed before the academic council for ratification. Any emergency modification of regulation, approved in the Heads of the Departments Meetings, shall be reported to the academic council for ratification.

18. AMENDMENTS TO REGULATIONS

The Academic Council may, from time to time, revise, amend or change the regulations, schemes of examination and/or syllabi.