

Regulations 2019

(Amendments updated upto December 2020)

M.Tech. / MCA / M.Sc./ M.Com. Degree Programme



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for

M.Tech. / MCA / M.Sc. / M.Com. DEGREE PROGRAMMES

B.S.ABDUR RAHMAN CRESCENT INSTITUTE OF SCIENCE & TECHNOLOGY, CHENNAI – 600 048. REGULATIONS -2019 FOR

M.Tech. / MCA / M.Sc. / M.Com. DEGREE PROGRAMMES

(Under Choice Based Credit System)

1.0 PRELIMINARY DEFINITIONS AND NOMENCLATURE

In these Regulations, unless the context otherwise requires

"Programme" means Post Graduate Degree Programme (M.Tech. / MCA/ M.Sc. / M.Com.)

"Course" means a theory / practical / laboratory integrated theory / mini project / seminar / internship / Project and any other subject that is normally studied in asemester like Advanced Concrete Technology, Electro Optic Systems, Financial Reporting and Accounting, Analytical Chemistry, etc.,

"Institution" means B.S. Abdur Rahman Crescent Institute of Science & Technology.

"Academic Council" means the Academic Council, which is the apex body on all academic matters of B.S. Abdur Rahman Crescent Institute of Science & Technology.

"Dean (Academic Affairs)" means Dean (Academic Affairs) of B.S. Abdur Rahman Crescent Institute of Science & Technology who administers the academic matters.

"Dean (Student Affairs)" means Dean (Student Affairs) of B.S. Abdur Rahman Crescent Institute of Science & Technology, who looks after the welfare and discipline of the students.

"Controller of Examinations" means the Controller of Examinations of B.S. Abdur Rahman Crescent Institute of Science & Technology who is responsible for the conduct of examinations and declaration of results.

2.0 PROGRAMMES OFFERED AND ADMISSION REQUIREMENTS

2.1 Programmes Offered

The various programmes and their mode of study are as follows:

Degree	Mode of Study
M.Tech.	Full Time

MCA
M.Sc.
M.Com.

2.2 ADMISSION REQUIREMENTS

- 2.2.1 Students for admission to the first semester of the Master's Degree Programme shall be required to have passed the appropriate degree examination of this Institution as specified in the clause 3.2 [Eligible entry qualifications for admission to P.G. programmes] or any other degree examination of any University or authority accepted by this Institution as equivalent thereto.
- **2.2.2**Eligibility conditions for admission such as class obtained, number of attempts in the qualifying examination and physical fitness will be as prescribed by the Institution from time to time.

3.0DURATION, ELIGIBILITY AND STRUCTURE OF THE PROGRAMME

3.1. The minimum and maximum period for completion of the Programmes are given below:

Programme	Min. No. of	Max. No. of
i rogramme	Semesters	Semesters
M.Tech.	4	8
MCA (3 years)	6	12
MCA (Lateral Entry)	4	8
MCA (2 years)	4	8
M.Sc.	4	8
M.Com.	4	8

- 3.1.1 Each academic semester shall normally comprise of 90 working days.
 Semester End Examinations shall follow within 10 days of the last Instructional day.
- 3.1.2 Medium of instruction, examinations and project report shall be in English.

3.2 ELIGIBLE ENTRY QUALIFICATIONS FOR ADMISSION TO PROGRAMMES

SI.	Name of the	Programmes	Qualifications for admission
No.	Department	offered	Qualifications for autilission

4	Aeronautical	M.Tech.	B.E. / B. Tech. (Aeronautical
1.	Engineering	(Avionics)	Engineering)
		M.Tech. (Structural Engineering)	B.E. / B. Tech. (Civil Engineering) / (Structural Engineering)
2.	Civil Engineering	M. Tech. (Construction Engineering and Project Management)	B.E. / B. Tech. (Civil Engineering) / (Structural Engineering) / B. Arch.
3.	Mechanical Engineering	M.Tech. (Manufacturing Engineering) M.Tech. (CAD/CAM)	B.E. / B.Tech. (Mechanical / Automobile / Manufacturing / Production / Industrial / Mechatronics / Metallurgy / Aerospace /Aeronautical / Material Science / Marine Engineering)
4.	Electrical and Electronics Engineering	M.Tech. (Power Systems Engg.) M.Tech. (Power Electronics and Drives)	B.E. /B.Tech. (EEE/ECE/E&I/I&C / Electronics / Instrumentation)
5.	Electronics and Communication Engineering	M.Tech. (Communication Systems) M.Tech. (VLSI and Embedded Systems)	B.E. / B.Tech. (EEE/ ECE / E&I / CSE IT / I&C / Electronics / Instrumentation) B.E./ B.Tech. (ECE / E&I / I&C / EEE / CSE / IT)
6.	Electronics and Instrumentation Engineering	M.Tech. (Electronics and Instrumentation Engineering)	B.E./ B.Tech. (EIE/ICE/Electronics/ECE/EEE)

7. 8.	Computer Science and Engineering Information Technology	M.Tech. (Computer Science and Engineering) M.Tech. (Information Technology)	B.E. / B.Tech. (CSE/IT/ECE/EEE/EIE/ICE/ Electronics / MCA) B.E. / B.Tech. (IT/CSE/ECE/EEE/EIE/ICE/ Electronics / MCA)
		MCA (3 years)	Bachelor Degree in any discipline with Mathematics as one of the subjects (or) Mathematics at +2 level
		MCA – (Lateral Entry)	B.Sc. Computer Science / B.Sc. Information Technology / BCA
9.	Computer Applications	MCA (2 years)	Bachelor Degree in any discipline with Mathematics as one of the subjects (or) Mathematics at +2 level or B.Sc. Computer Science / B.Sc. Information Technology / BCA
10.	Mathematics	M.Sc. (Actuarial Science)	Any Degree with Mathematics / Statistics as one of the subjects of study
11.	Physics	M.Sc.(Physics)	B.Sc. (Physics / Applied Science / Electronics / Electronics Science / Electronics & Instrumentation)
12.	Chemistry	M.Sc.(Chemistry)	B.Sc. (Chemistry / Applied Science)
13.	Life Sciences	M.Sc. Molecular Biology &Biochemistry	B.Sc. in any branch of Life Sciences

		M.Sc.	B.Sc. in any branch of Life
		Biotechnology	Sciences
		M.Sc.	B.Sc. in any branch of Life
		Microbiology	Sciences
		M.Tech.	B.Tech. (Biotechnology / Chemical
			Engineering) / M.Sc. in any branch
		Biotechnology	of Life Sciences
	Commerce	M.Com	Candidates who have passed
			B.Com/BBA degree (General or
14.			any Specialization) of this Institution
			or authority accepted by this
			Institution as equivalent thereto.

3.3.STRUCTURE OF THE PROGRAMME

- **3.3.1** The PG. programmes consist of the following components as prescribed in the respective curriculum
 - i. Core courses
 - ii. Elective courses
 - iii. Laboratory oriented core courses
 - iv. Project work / thesis / dissertation
 - v. Laboratory Courses
 - vi. Seminars
 - vii. Mini Project
 - viii. Industrial Internship
 - ix. Value Added Courses
 - x. MOOC Courses (NPTEL, SWAYAM, etc.,)
- **3.3.2** The curriculum and syllabi of all programmes shall be approved by the Academic Council of this Institution.
- 3.3.3 For the award of the degree, the student has to earn a minimum total creditsspecified in the curriculum of the respective specialization of the programme.
- 3.3.4The curriculum ofprogrammes shall be so designed that the minimum

prescribed credits required for the award of the degree shall be within the limits specified below:

Programme	Range of credits
M.Tech.	74-80
MCA (3 years)	118 - 126
MCA(Lateral Entry)	80 - 85
MCA (2 years)	85 - 90
M.Sc.	77- 82
M.Com.	88

- **3.3.5** Credits will be assigned to the courses for all programmes as given below:
 - Onecredit for one lecture period per week or 15 periods of lecture per semester
 - ❖ One credit for one tutorial period per week or 15 periods per semester
 - One credit each for seminar/practical session/project of two or three periods per week or 30 periods per semester
 - One credit for four weeks of industrial internship or 160 hours per semester.
- 3.3.6 The number of credits the student shall enroll in a non-project semester and project semester is as specified below to facilitate implementation of Choice Based Credit System.

Programme	Non-project semester	Project semester
M.Tech.	9 to 28	18 to 26
MCA	12 to 33	12 to 26
M.Sc.	9 to 32	10 to 26

- **3.3.7** The student may choose a course prescribed in the curriculum from any department offering that course without affecting regular class schedule. The attendance will be maintained course wise only.
- **3.3.8** The students shall choose the electives from the curriculum with the approval of the Head of the Department / Dean of School.
- 3.3.9 Apart from the various elective courses listed in the curriculum for each specialization ofprogramme, the student can choose a maximum of two electives from any other similar programmes across departments, during the

entire period of study, with the approval of the Head of the department offering the course and parent department.

3.4.ONLINE COURSES

- 3.4.1 Students are permitted to undergo department approved online courses under SWAYAM up to 20% of credits of courses in a semester excluding project semester with the recommendation of the Head of the Department / Dean of School and with the prior approval of Dean Academic Affairs during his/ her period of study. The credits earned through online courses ratified by the respective Board of Studies shall be transferred following the due approval procedures. The online courses can be considered in lieu of core courses and elective courses.
- **3.4.2** Students shall undergo project related online course on their own with the mentoring of the faculty member.

3.5PROJECT WORK/DISSERTATION

- **3.5.1** Project work / Dissertation shall be carried out by the student under the supervision of a Faculty member in the department with similar specialization.
- 3.5.2 A student may however, in certain cases, be permitted to work for the project in an Industry / Research Organization, with the approval of the Head of the Department/ Dean of School. In such cases, the project work shall be jointly supervised by a faculty of the Department and an Engineer / Scientist from the organization and the student shall be instructed to meet the faculty periodically and to attend the review meetings for evaluating the progress.
- **3.5.3** The timeline for submission of final project report / dissertation is within 30 calendar days from the last Instructional day of the semester in which Project / Dissertation is done.
- 3.5.4 If a student does not comply with the submission of project report / dissertation on or before the specified timeline he / she is deemed to have not completed the project work / dissertation and shall re-register in the subsequent semester.

4.0CLASS ADVISOR AND FACULTY ADVISOR

4.1 CLASS ADVISOR

A faculty member shall be nominated by the HOD/ Dean of School as Class

Advisor for the whole class. He/she is responsible for maintaining the academic, curricular and co-curricular records of all students throughout their period of study.

4.2 FACULTY ADVISOR

To help the students in planning their courses of study and for general counseling on the academic programme, the Head of the Department / Dean of School of the students shall attach a certain number of students to a faculty member of the department who shall function as Faculty Advisor for the students throughout their period of study. Such Faculty Advisor shall offer advice to the students on academic and personal matters, and guide the students in taking up courses for registration and enrolment in every semester.

5.0CLASS COMMITTEE

- 5.1 A class committee comprising faculty members handling the classes, student representatives and a senior faculty member not handling the courses as chairman will be constituted in every semester:
- **5.2** The composition of the class committee will be as follows:
 - i) One senior faculty member preferably not handling courses for the concerned semester, appointed as chairman by the Head of the Department
 - ii) Faculty members of all courses of the semester
 - iii) All the students of the class
 - iv) Faculty advisor and class advisor
 - v) Head of the Department Ex officio member
- 5.3 The class committee shall meet at least three times during the semester. The first meeting shall be held within two weeks from the date of commencement of classes, in which the nature of continuous assessment for various courses and the weightages for each component of assessment shall be decided for the first and second assessment. The second meeting shall be held within a week after the date of first assessment report, to review the students' performance and for follow up action.
- **5.4** During these two meetings the student members, shall meaningfully interact

- and express opinions and suggestions to improve the effectiveness of the teaching-learning process, curriculum and syllabus.
- 5.5 The third meeting of the class committee, excluding the student members, shall meet within 5 days from the last day of the semester end examination to analyze the performance of the students in all the components of assessments and decide their grades in each course. The grades for a common course shall be decided by the concerned course committee and shall be presented to the class committee(s) by the concerned course coordinator.

6.0COURSE COMMITTEE

6.1 Each common theory / laboratorycourse offered to more than one group of students shall have a "Course Committee" comprising all the teachers handling the common course with one of them nominated as course coordinator. The nomination of the course coordinator shall be made by the Head of the Department / Dean (Academic Affairs) depending upon whether all the teachers handling the common course belong to a single department or from several departments. The Course Committee shall meet as often as possible to prepare a common question paper, scheme of evaluation and ensure uniform evaluation of the assessment tests and semester end examination.

7.0REGISTRATION AND ENROLLMENT

- **7.1** The students of first semester shall register and enroll at the time of admission by paying the prescribed fees.
- **7.2** For the subsequent semesters registration for the courses shall be done by the student one week before the last working day of the previous semester.
- 7.3 A student can withdraw from an enrolled course at any time before the first assessment test for genuine reasons, with the approval of the Dean (Academic Affairs), on the recommendation of the Head of the Department of the student.
- 7.4 A student can change an enrolled course within 10 working days from the commencement of the course, with the approval of the Dean (Academic Affairs), on the recommendation of the Head of the Department of the student.

8.0TEMPORARY BREAK OF STUDY FROM THE PROGRAMME

8.1 A student may be permitted by the Dean (Academic Affairs) to avail temporary break of study from the programme up to a maximum of two semesters for reasons of ill health or other valid grounds. A student can avail the break of study before the start of first assessment test of the ongoing semester. However the total duration for completion of the programme shall not exceed the prescribed maximum number of semesters (vide clause 3.1). If any student is debarred for want of attendance or suspended due to any act of indiscipline, it will not be considered as break of study. A student who has availed break of study has to rejoin in the same semester only in the subsequent year. The student availing break of study is permitted to write arrear examinations by paying the prescribed fees.

9.0 MINIMUM REQUIREMENTS TO REGISTER FOR PROJECT / DISSERTATION

9.1 A student is permitted to register for project semester, if he/she has earned the minimum number of credits specified below:

Programme	Minimum no. of credits to be earned to enroll for project semester
M.Tech.	18
MCA (3 years)	45
MCA (Lateral Entry)	22
MCA (2 years)	22
M.Sc.	18
M.Com	NA

9.2 If the student has not earned minimum number of creditsspecified, he/she has to earn the required credits, at least to the extent of minimum credits specified in clause 9.1 and then register for the project semester.

10.0ATTENDANCE

10.1 A student shall earn 100% attendance in the contact periods of every course, subject to a maximum relaxation of 25% (for genuine reasons such as medical grounds, representing for the institution in approved events, etc.) to become eligible to appear for the semester end examination in that course,

- failing which the student shall be awarded "I" grade in that course. The courses in which the student is awarded "I" grade, shall register and redo the course when it is offered next.
- 10.2 The faculty member of each course shall cumulate the attendance details for the semester and furnish the names of the students who have not earned the required attendance in that course to the Class Advisor. The Class Advisor will consolidate and furnish the list of students who have earned less that 75% attendance, in various courses, to the Dean (Academic Affairs) through the Head of the Department / Dean of School. Thereupon, the Dean (Academic Affairs) shall announce the names of such students prevented from writing the semester end examination in each course.
- 10.3 A student who has obtained 'I' grade in all the courses in a semester is not permitted to move to next higher semester. Such student shall redo all the courses of the semester in the subsequent academic year. However he / she is permitted to redo the courses awarded with 'I' grade / arrear in previous semesters. They shall also be permitted to write arrear examinations by paying the prescribed fee.
- 10.4 A student shall register to redo a core course wherein "I" or "W" grade is awarded. If the student is awarded, "I" or "W" grade in an elective course either the same elective course may be repeated or a new elective course may be chosen with the approval of Head of the Department / Dean of School.

11.0REDO COURSES

- 11.1 A student can register for a maximum of two redo courses per semester in the evening after regular working hours, if such courses are offered by the concerned department. Students may also opt to redo the courses offered during regular semesters, without affecting the regular academic schedule and not exceeding prescribed maximum credits.
- 11.2 The Head of the Department with the approval of Dean (Academic Affairs) may arrange for the conduct of a few courses in the evening after regular working hours, depending on the availability of faculty members and subject to a specified minimum number of students registering for each of such

courses.

11.3 The number of contact hours and the assessment procedure for any redo course will be the same as those during regular semesters except that there is no provision for any substitute examination and withdrawal from an evening redo course.

12.0ASSESSMENTS AND EXAMINATIONS

12.1 Every theory course shall have a total of three assessments during a semester as given below:

Assessments	Weightageof Marks
Continuous Assessment 1	25%
Continuous Assessment 2	25%
Semester End Examination	50%

- 12.2 Appearing for semester end theory examination for each course is mandatory and a student should secure a minimum of 40% marks in each course in semester end examination for the successful completion of the course.
 - Every practical course shall have 75% weightage for continuous assessments and 25% for semester end examination. However a student should have secured a minimum of 50% marks in the semester end practical examination for the award of pass grade.
- 12.3 For laboratory integrated theory courses, the theory and practical components shall be assessed separately for 100 marks each and consolidated by assigning a weightage of 75% for theory component and 25% for practical component. Grading shall be done for this consolidated mark. Assessment of theory component shall have a total of three assessments with two continuous assessments having 25% weightage each and semester end examination having50% weightage. The student shall secure a separate minimum of 40% in the semester end theory examination for the award of pass grade. The evaluation of practical component shall be through continuous assessment.
- **12.4** The components of continuous assessment for theory/practical/laboratory integrated theory courses shall be finalized in the first class committee meeting.
- **12.5** In the case of Industrial training, the student shall submit a report, which shall

be evaluated along with an oral examination by a committee of faculty members constituted by the Head of the Department. The student shall also submit an internship completion certificate issued by the industry / research organisation. The weightage for Industry internship reportshall be 60% and 40% for viva voce examination.

- 12.6 In the case of project work, a committee of faculty members constituted by the Head of the Department will carry out three periodic reviews. Based on the project report submitted by the student, an oral examination (viva voce) shall beconducted as semester end examination by an external examiner approved by Controller of Examinations. The weightage for periodic reviews shall be 50%. Of the remaining 50%, 20% shall be for the project report and 30% for the Viva Voce examination.
- 12.7 For the first attempt of the arrear theory examination, the internal assessment marks scored for a course during first appearance shall be considered for grading along with the marks scored in the semester end arrear examination. From the subsequent appearance onwards, full weightage shall be assigned to the marks scored in the semester end examination to award grades and the internal assessment marks secured during the course of study shall not be considered.

In case of laboratory integrated theory courses, after one regular and one arrear appearance, the internal mark of theory component is invalid and full weightage shall be assigned to the marks scored in the semester end arrear examination for theory component. There shall be no arrear or improvement examination for lab component.

13.0 SUBSTITUTE EXAMINATIONS

13.1 A student who is absent, for genuine reasons, may be permitted to write a substitute examination for any one of the two continuous assessment tests of a course by paying the prescribed substitute examination fee. However, permission to take up a substitute examination will be given under exceptional circumstances, such as accidents, admission to a hospital due to illness, etc. by a committee constituted by the Head of the Department / Dean of School for that purpose. However there is no substitute examination for semester end

examination.

13.2 A student shall apply for substitute exam in the prescribed form to the Head of the Department / Dean of School within a week from the date of assessment test. However the substitute examination will be conducted only after the last working day of the semester and before the semester end examination.

14.0 SUPPLEMENTARY EXAMINATION

14.1 Final Year students can apply for supplementary examination for a maximum of three courses thus providing an opportunity to complete their degree programme. Likewise students with less credit can also apply for supplementary examination for a maximum of three courses to enable them to earn minimum credits to move to higher semester. The students can apply for supplementary examination within three weeks of the declaration of results in both odd and even semester.

15. PASSING, DECLARATION OF RESULTS AND GRADE SHEET

15.1 All assessments of a course shall be made on absolute marks basis. However, the Class Committee without the student members shall meet within 5 days after the semester end examination and analyze the performance of students in all assessments of a course and award letter grades. The letter grades and the corresponding grade points are as follows:

Letter Grade	Grade Points
S	10
А	9
В	8
С	7
D	6
E	5
U	0
W	0
I	0
AB	0

"W" denotes withdrawal from the course.

[&]quot;I" denotes inadequate attendance and hence prevented from appearing for

semester end examination

"U" denotes unsuccessful performance in the course.

"AB" denotes absence for the semester end examination.

- **15.2** A student who earns a minimum of five grade points ('E' grade) in a course is declared to have successfully completed the course. Such a course cannot be repeated by the student for improvement of grade.
- 15.3 The results, after awarding of grades, shall be signed by the Chairman of the Class Committee and Head of the Department/Dean of School and it shall be declared by the Controller of Examinations.
- 15.4 Within one week from the date of declaration of result, a student can apply for revaluation of his / her semester end theory examination answer scripts of one or more courses, on payment of prescribed feeto the Controller of Examinations. Subsequently the Head of the Department/ Dean of School offered the course shall constitute a revaluation committee consisting of Chairman of the Class Committee as convener, the faculty member of the course and a senior faculty member knowledgeable in that course as members. The committee shall meet within a week to re-evaluate the answer scripts and submit its report to the Controller of Examinations for consideration and decision.
- 15.5 After results are declared, grade sheets shall be issued to each student, which contains the following details: a) list of courses enrolled during the semester including redo courses / arrear courses, if any; b) grades scored; c) Grade Point Average (GPA) for the semester and d) Cumulative Grade Point Average (CGPA) of all courses enrolled from first semester onwards.

GPA is the ratio of the sum of the products of the number of credits of courses registered and the grade points corresponding to the grades scored in those courses, taken for all the courses, to the sum of the number of credits of all the courses in the semester.

If C_i, is the number of credits assigned for the ith course and GP_i is the Grade Point in the ith course

$$GPA = \frac{\sum_{i=1}^{n} (C_i)(GPi)}{\sum_{i=1}^{n} C_i}$$

Where n = number of courses

The Cumulative Grade Point Average (CGPA) is calculated in a similar manner, considering all the courses enrolled from first semester.

"I" and "W" grades are excluded for calculating GPA.

"U", "I", "AB" and "W" grades are excluded for calculating CGPA.

The formula for the conversion of CGPA to equivalent percentage of marks is as follows:

Percentage Equivalent of Marks = CGPA X 10

15.6 After successful completion of the programme, the Degree shall be awarded upon fulfillment of curriculum requirements and classification based on CGPA as follows:

Classification	CGPA
First Class with Distinction	8.50 and above and passing all the courses in first appearance and completing the programme within the minimum prescribed period.
First Class	6.50 and above and completing the programme within a minimum prescribed period plus two semesters.
Second Class	Others

However, to be eligible for First Class with Distinction, a student should not have obtained 'U' or 'I' grade in any course during his/her period ofstudy and should have completed the P.G. programme within a minimum period (except break of study). To be eligible for First Class, a student should have passed the examination in all the courses within the specified minimum number of semesters reckoned from his/her commencement of study plus two semesters. For this purpose, the authorized break of study is not considered. The students who do not satisfy the above two conditions shall be classified as second class. For the purpose of classification, the CGPA shall be rounded to two decimal places. For the purpose of comparison of performance of students and ranking, CGPA will be considered up to three decimal places.

16.0DISCIPLINE

16.1 Every student is expected to observe disciplined and decorous behaviour both

- inside and outside the campus and not to indulge in any activity which tends to affect the reputation of the Institution.
- 16.2 Any act of indiscipline of a student, reported to the Dean (Student Affairs), through the HOD / Dean shall be referred to a Discipline and Welfare Committee constituted by the Registrar for taking appropriate action.

17.0 ELIGIBILITY FOR THE AWARD OF THE MASTERS DEGREE

- **17.1** A student shall be declared to be eligible for the award of the Masters Degree, if he/she has:
 - i. Successfully acquired the required credits as specified in the curriculum corresponding to his/her programme within the stipulated time.
 - ii. No disciplinary action is pending against him/her.
 - iii. Enrolled and completed at least one value added course.
 - iv. Enrollment in at least one MOOC / SWAYAM course (non-credit) before the final semester.
- **17.2** The award of the degree must have been approved by the Institute.

18.0POWER TO MODIFY

Notwithstanding all that have been stated above, the Academic Council has the right to modify any of the above regulations from time to time.
