



**RANI CHANNAMMA UNIVERSITY, BELGAUM**  
**DEPARTMENT OF COMPUTER SCIENCE**  
**SCHOOL OF MATHEMATICS AND COMPUTING SCIENCES**

**M.Sc. in COMPUTER SCIENCE**  
**CHOICE BASED CREDIT SYSTEM**

**NEW**  
**REGULATIONS and COURSE STRUCTURE**

**w.e.f**  
**Academic Year 2016-17 and onwards**

# **RANI CHANNAMMA UNIVERSITY, BELGAUM.**

## **DEPARTMENT OF COMPUTER SCIENCE**

### **SCHOOL OF MATHEMATICS & COMPUTING SCIENCE**

#### **Regulations for Post-Graduate Programme in Computer Science under Choice-Based Credit System (C.B.C.S)**

**w.e.f. 2016-17**

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#### **1.0 Course Offered: M.Sc Degree in Computer Science:**

#### **2.0 Duration:**

The Course shall be of Four Semesters and each semester is of 16 weeks duration. No student shall be permitted to obtain degree earlier than 4 semesters or to take more than 8 semesters, i.e., the student shall complete the course within four years from the date of admission to the first semester of Post Graduate Programme. The academic session in each semester will provide 90 teaching days.

However, the students, who discontinue the programme after one or more semesters due to extraordinary circumstances are allowed to continue and complete the programme with due approval from the Registrar on the recommendation of Chairman and concerned Dean. Candidates shall not register for any other regular course other than Diploma and Certificate Courses during the duration of the PG programme.

#### **3.0 Eligibility Criteria for Admission:**

3.1 The students who have successfully completed three year science degree course or any other three year/four year degree course, BCA, B.E., B.Tech (Computer Science and Engineering/Information Science and Engineering) with minimum 45% of marks in aggregate at degree level are eligible to apply. However, relaxation of 5% of marks in respect of SC/ST/Cat-I will be allowed as per prevailing rules of the University and Government Orders issued from time to time.

3.2 The admission shall be made as per the reservation policy and directions issued in this regard from time to time by the Government of Karnataka and also as per rules as prescribed by the University from time to time.

#### **4.0 Medium of Instruction:**

The medium of Instruction shall be English.

#### **5.0 Course Structure:**

The term 'Course' is used to indicate a logical part of a subject matter of the programme (also referred to as Paper). In essence, the courses are of four types:

- i. Compulsory/ Core Courses: These are the courses which shall common to all students across the programme
- ii. Core Elective/Optional Courses: These are the courses which students shall register from the Core Elective/Optional Courses offered by the department
- iii. Open Elective Courses: These are courses a student shall register from the courses offered by other departments from the schools or outside
- iv. Self study courses: These are courses a student shall register from the courses offered by the department may be 1 or 2 credits as in curriculum. In this course students need to study the syllabus on their own under the mentorship of a faculty. More than one course may be offered under this segment of the structure of syllabus and student shall opt any one of them.

The structure, scheme and credits for subjects shall be as per the recommendation of the Board of Studies (BoS) from time to time and approved by academic council and syndicate.

#### **6.0 Minimum and Maximum Credits:**

**6.1** "Credit" means the unit by which the course work is measured. For this Regulation, one Credit means one hour of teaching work or two hours of practical work per week or two hrs of guiding project work

**6.2** Total Credits for M.Sc(Computer Science) programme shall be as recommended by BoS from time to time.

## 7.0 Attendance:

- 7.1 Each paper/course shall be taken as a unit for the purpose of calculating the attendance.
- 7.2 Each student shall sign the attendance maintained for each course for every hour of teaching of each paper.
- 7.3 Marks shall be awarded to the students for attendance as specified in the regulations concerning the evaluation as shown below:

| <b>Attendance<br/>(in percentage)</b> | <b>90 and above</b> | <b>Above 80 and<br/>upto 90</b> | <b>Above 75<br/>And upto 80</b> | <b>75 and<br/>Below</b> |
|---------------------------------------|---------------------|---------------------------------|---------------------------------|-------------------------|
| <b>Marks</b>                          | <b>3</b>            | <b>2</b>                        | <b>1</b>                        | <b>No Marks</b>         |

- 7.4 A student shall be considered to have satisfied the required attendance for each course, if he/she has attended not less than 75% of the number of instructional hours during the semester.
- 7.5 A student shall be considered to have satisfied the required attendance for all course in a semester, if he/she has attended an average not less than 75% of the number of instructional hours during that semester.
- 7.6 There is no provision for condoning shortage of attendance.
- 7.7 The students who do not satisfy the prescribed requirement of attendance shall not be eligible for the ensuing examination. Such candidates may seek admission afresh to the given semester.
- 7.8 Such of the candidates who have participated in State/National level Sports, NSS, NCC, Cultural activities and other related activities as stipulated under the existing regulations shall be considered for giving attendance for actual number of days utilized in such activities (including travel days) subject to the production of certificates from the relevant authorities within two weeks after the event.

## 8.0 Duration of Teaching:

- 8.1 Each course (Compulsory/Core, Core elective/ Optional, Open Elective, Self Study) will have the duration of teaching hours per week as prescribed in the scheme by the BoS.

## **9.0 Examination:**

- 9.1 There shall be an examination at the end of each semester.
- 9.2 Unless otherwise provided, there shall be a semester end examination of 3 hours duration for 80 marks and internal assessment for 20 marks.
- 9.3 Unless otherwise recommended by the BoS, there shall be a semester end examination of 3 hours duration for 80 marks and internal assessment for 20 marks.
- 9.4 Every student shall register for each semester end examination as per the University notification by submitting duly completed application form through the proper channel and shall also pay the prescribed fees.
- 9.5 The office of the Registrar (Evaluation) shall allot the Register Number to the candidate at the 1<sup>st</sup> Semester end examination. That will be the Register Number of the candidate for all the subsequent appearances and semester examinations.
- 9.6 The answer scripts shall be in the safe custody of the University for a maximum period of six months from the date of announcement of the results. These shall be disposed off after six months.
- 9.7 The programme under CBCS is a fully carry-over system. A candidate reappearing either the odd or even semester examinations shall be permitted to take examinations as and when they are conducted (even semester examination in even semester and odd semester examination in odd semester).
- 9.8 Candidates who have failed, remained absent or opted for improvement in any course/s shall appear for such course/s in the immediate two successive examinations that are conducted. However, in the case of candidates appearing for improvement of their marks, the marks secured in the previous examination shall be retained if the same is higher.
- 9.9 The evaluation of the end semester examination shall be single internal evaluation during odd semesters and double evaluation during even semester involving external examiners. (Note: During the odd semester, wherever necessary external examiners may be called with the approval from the authorities.)

9.10 Whenever the syllabus is revised, the candidate reappearing shall be allowed for PG Degree examinations only according to the new syllabus.

## 10.0 Course Weightage:

Course Weightage would be equal to the number of credits awarded to the particular course. For instance, if the Compulsory Course has a credit award of 4, then the appropriate weightage for the course would be 4.

## 11.0 Course Evaluation :

11.1 Each course shall have two evaluation components - Internal assessment (IA) and the semester end examinations.

11.2 The IA component in a course shall carry 20 marks (including 3marks for attendance as specified above) and the semester end examination shall carry 80 marks.

11.3 The various components of I.A. for 20 marks are as follows:

|                            |    |          |
|----------------------------|----|----------|
| i) Attendance              | -- | 3 Marks  |
| ii) Assignment/Seminar/etc | -- | 3 Marks  |
| iii) Test                  | -- | 14 Marks |
|                            |    | -----    |
| Total                      | -- | 20 Marks |
|                            |    | -----    |

11.4 There shall be two tests of 14 (fourteen) marks each of one hour duration. The average of the two shall be considered.

11.5 Calendar of tests shall be notified in the first week of each semester.

11.6 The IA marks list shall be notified on the Department Notice Board as and when the individual IA components are completed and the consolidated list shall be submitted to the Office of the Registrar (Evaluation) before the commencement of semester-end examination, or as directed by the University in this regard from time to time.

11.7 The tests shall be written in a separate sheet supplied by the Department/College which shall be open for inspection by the students after evaluation

11.8 There is no provision for seeking improvement of Internal Assessment marks.

11.9 If a candidate remains absent for I.A. Test, there is no provision for Re-test.

- 11.10 In case of the Project/Dissertation, 50 marks are allotted for viva voce test as Internal Assessment (IA) and 150 marks are allotted for the evaluation of the dissertation/ report for the semester end examination
- 11.11 The self study courses shall be assessed only through internal assessment (IA) component (No end semester examination) only. The evaluation of self study course shall be through two IA test of 30 marks each. There shall be a presentation/viva-voce 40 marks at the end of the semester. The presentation/ vive-voce shall be conducted at the department level through a panel of examiners, consisting of the Mentor, Chairman and one senior faculty other than the mentor and chairman.

## **12.0 Declaration of Results:**

- 12.1 Minimum for a pass in each paper shall be 40% of the total 100 marks including both the IA / Practical and the semester end examinations marks. However, candidate shall obtain at least 40% of the marks in the Semester End Examination (i.e. 32/80). There is no minimum in the IA / Practical marks. However, after adding the IA / Practical and the semester end examinations marks, the candidate shall score a minimum 40% of the maximum marks for the course/paper.
- 12.2 Candidates shall secure a minimum of 50% in aggregate in all courses/papers of a programme in each semester to successfully complete the programme.
- 12.3 Candidates shall earn the prescribed number of credits as prescribed by the BoS from time to time for the programme to qualify for the PG Degree in Computer Science.
- 12.4 For the purpose of announcing the results, the aggregate of the marks secured by a candidate in all the semester examinations shall be taken into account. However, Ranks shall not be awarded in case the candidate has not successfully completed each of the semesters in first attempt or has not completed the programme in the stipulated time or had applied for improvement of results.
- 12.5 The candidates, seeking improvement of their results shall submit an application along with a prescribed fee to the Registrar (evaluation) and surrender the degree certificate /

provisional pass certificate/original marks cards of that semester within 15 days from the date of announcement of the result, or as per the prevailing rules of University from time to time.

### **13.0 Marks, Credit Points, Grade Points, Grades and Grade Point Average:**

13.1 The grade points and the grade letters to candidates in each course shall be awarded as follows:

| <b>Percentage of marks</b>      | <b>Grade Points</b>                | <b>Grade Letter</b> |
|---------------------------------|------------------------------------|---------------------|
| 75 and above, up to 100.00 %    | 7.50 to 10.00                      | A                   |
| 60 and above but less than 75 % | 6.00 and above but less than 07.5  | B                   |
| 50 and above but less than 60 % | 5.00 and above but less than 6.0   | C                   |
| 40 and above but less than 50 % | 4.00 and above but less than 05.00 | D                   |
| Less than 40.00 %               | Less than 4.00                     | F                   |

All the grade points shall be calculated shall calculated up to two decimal points on rounded to nearest integer.

13.2 Credit Point (CP): The Credit Point for each course/paper shall be calculated by multiplying the grade point obtained by the credit of the course.

13.3 The award of Grade Point Average (GPA) for any student is based on the performance in the whole semester. The student is awarded Grade Point Average for each semester based on the Total Credit Points obtained and the total number of credits opted for. The GPA is calculated by dividing the total credit points earned by the student in all the courses by the total number of credits of those courses of the semester.

13.4 The Cumulative Grade Point Average (CGPA) shall be calculated by dividing the total number of credit points in all the semesters by the total number of credits in all the semesters. The CGPA to date shall be calculated by dividing the total number of credit points in all the semesters to date by the total number of credits in all the semesters to date.

CGPA for the I semester =

Sum of the CP of the I semester ÷ Sum of the credits of the I semester

CGPA for the II semester =



Sum of the CP of the I sem.+ Sum of the CP of the II sem. ÷ Sum of the credits of the I semester +II semester

CGPA for the III and IV Semesters shall be computed accordingly.

13.5 The Grade Card at each semester examination shall indicate the courses opted by the student, the credit for the course chosen by the student, the credit points obtained in each course, the grade letter and the grade point average. No class shall be awarded for each semester and the same shall only be awarded at the end of all the semesters based on Cumulative Grade Point Average.

13.6 Class shall be awarded to the successful candidates based on the Cumulative Grade Point Average (CGPA) as specified below:

| <b>Cumulative Grade Point Average (CGPA)</b> | <b>Class to be awarded</b>   |
|--|------------------------------|
| 7.5 to 10.0                                  | First Class with Distinction |
| 6.0 and above but below 7.5                  | First Class                  |
| 5.0 and above but below 6.0                  | Second Class                 |
| Less than 5.0                                | Fails                        |

#### **14.0 Question paper pattern:**

The question paper pattern shall be as recommended by BoS from time to time for end semester examination. However the pattern of question paper shall be made available to the students along with the structure and syllabus

#### **15.0 Miscellaneous:**

15.1 The provisions of any order, rules or regulations in force shall be inapplicable to the extent of its inconsistency with these Regulations.

15.2 The University shall issue such orders, instructions, procedures and prescribe such format as it may deem fit to implement the provisions of these Regulations.

15.3 Procedural details may be given by the University from time to time.

15.4 Any unforeseen problems/difficulties may be resolved by the Vice- Chancellor, whose decision in the matter shall be final.

**Illustrative Model:  
Grade Card  
Programme : \_\_\_\_\_**

Name of the candidate:

Semester : I

Seat No:

Month & Year:

| Course/Papers                          | Course/Papers Code No. | Credits | Max Marks | Mark Obtained | Semester Grade Point | Credit Points |
|--|------------------------|---------|-----------|---------------|----------------------|---------------|
| <b>Compulsory Paper / Core Courses</b> |                        |         |           |               |                      |               |
| • Course-I                             |                        | 04      | 100       | 60            | 6.00                 | 24.00         |
| • Course-II                            |                        | 04      | 100       | 74            | 7.40                 | 29.60         |
| • Course-III                           |                        | 04      | 100       | 43            | 4.30                 | 17.20         |
| • Course-IV                            |                        | 40      | 100       | 52            | 5.20                 | 20.80         |
| • Course-V                             |                        | 04      | 100       | 75            | 7.50                 | 30.00         |
| • Course-VI                            |                        | 04      | 100       | 60            | 6.00                 | 24.00         |
| <b>Practicals</b>                      |                        |         |           |               |                      |               |
| • Course-VII                           |                        | 03      | 100       | 75            | 7.50                 | 30.00         |
| • Course-VIII                          |                        | 03      | 100       | 60            | 6.00                 | 24.00         |
| <b>Total</b>                           |                        | 30      | 800       | 499           | 49.9                 | 199.60        |

GPA for I Semester = Total no.of CP ÷ Total no. of Credits =199.60/30.00=6.65

CGPA for I Semester = GPA = 6.15

$$\text{CGPA for II Sem} = \frac{\text{CP (I Sem)} + \text{CP (II Sem)}}{\text{Credits (I Sem)} + \text{Credits (II Sem)}}$$

$$\text{CGPA for III Sem} = \frac{\text{CP (I Sem)} + \text{CP(II Sem)} + \text{CP(III Sem)}}{\text{Credits (I Sem)} + \text{Credits(II Sem)} + \text{Credits(III Sem)}}$$

$$\text{CGPA for the programme} = \frac{\text{CP (I Sem)} + \text{CP(II Sem)} + \text{CP(III Sem)} + \text{CP(IV Sem)}}{\text{Credits (I Sem)} + \text{Credits(II Sem)} + \text{Credits(III Sem)} + \text{Credits(IV Sem)}}$$

(\*CP: Credit Points)