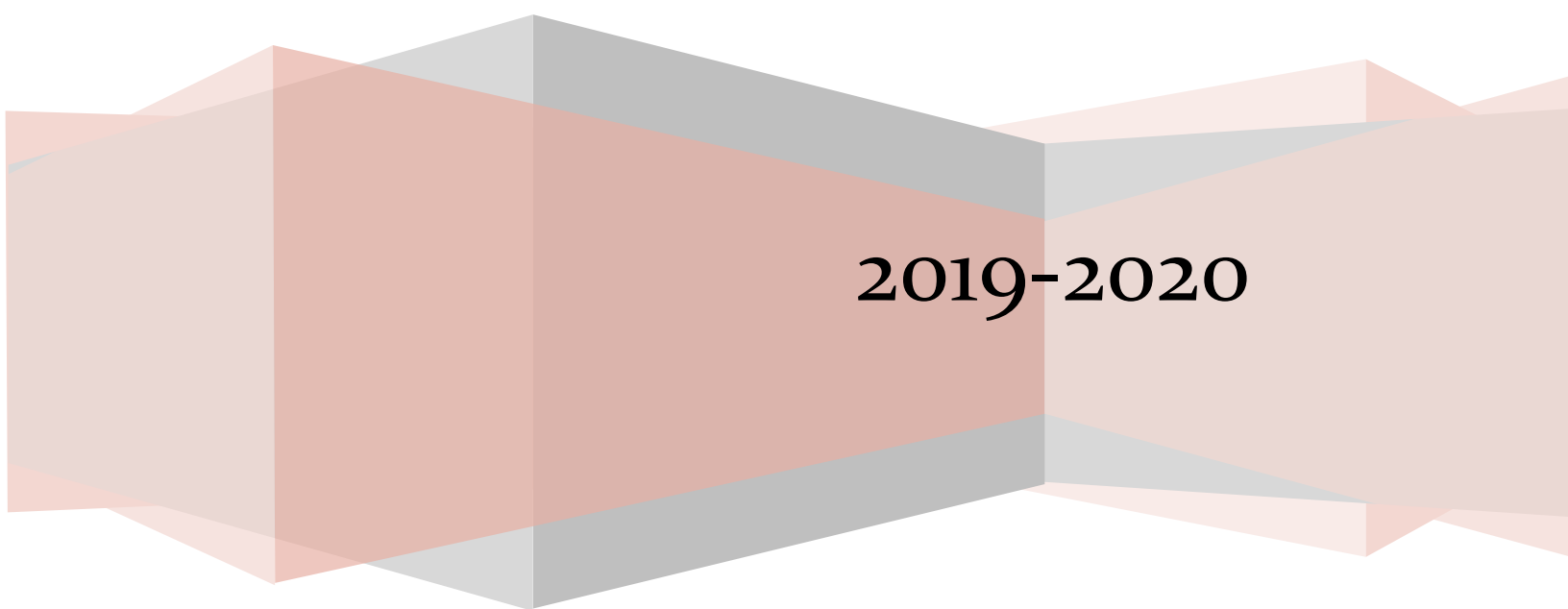# *DEPARTMENT MANUAL*

Department of Computer Science

**Ramaiah College of Arts, Science and Commerce,
MSRIT Post, MSR Nagar Bangalore - 560054
Email: bca_dept@msrcasc.edu.in**

2019-2020

FOREWORD

Our Department has produced hundreds of professionals and has established a name for itself in the country and abroad. They have consistently excelled in the highly competitive industrial environment, Best Employer/ awards in top-ranking companies. I attribute this success to the winning combination of a dedicated faculty that works hard at imparting quality education, a well-planned syllabus and our students.

Learning is a continuous process and does not end with the acquisition of a degree, especially because steady and rapid advances in computing technologies shorten the life of tools and techniques prevalent today. Therefore we do not aim to make our students walking manuals of any language or package. Instead, they are given a strong foundation in computer science and problem-solving techniques, and are made adaptable to changes.

We believe that this approach to teaching-learning, coupled with practical experience gained during Industrial Training in reputed organizations, equips our students to handle the challenges posed by the software industry. I am confident that you will find our students worthy of your organization.

Dr Prathiba V Kalburgi

HOD, Computer Science

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Introduction

The BCA Department was established in the year 2000 with 45 students and it has extended to 240 students. Computer Science is a broad field which encompasses all aspects of computers, including the design and application of both hardware and software. Career opportunities are diverse and are found in computer design, manufacturing, development, testing, transportation, communications, research, education and management. It helps students to become responsible Computer and IT professionals with strong moral values.

Department organizes and encourages co-curricular activities like Seminars, Workshops, Guest lectures, Educational trips and visit to Multi National Companies. The Computer Science department of RCASC aims to educate students in the science and practice of IT. The emphasis is on hands-on practical training of software development. The curriculum prepares students for a career in the fast lane of software development and programming. The program enables the student to be updated on the latest revolution in technology and equips the students with the required skills and knowledge to assimilate into the industry at ease. The content delivery is uniquely complemented by extensive practical training. The course covers computer programming, algorithms, problem solving, software development, mathematics, software engineering, operating systems, and theory of computations and so on...The department has got well established spacious laboratory to provide good lab facility.

We do conduct workshops, seminars, guest lectures, interclass competitions and conferences for students. Students of BCA have participate in Inter-Collegiate Fest organized by various other colleges and have won many individual prizes. They have also participated in sports at the national and international level. The department has achieved 5 University ranks and also centum scorers every year.

Courses offered

Course Structure of BCA

Semester	Paper	Title of the paper	Hours/ Week	Marks			Credits	
				IA	Exam	Total	Subject	Semester
I	BCA101T	Indian Language	4	30	70	100	**2**	
	BCA102T	English	4	30	70	100	**2**	
	BCA103T	Problem Solving Techniques using C	4	30	70	100	**2**	
	BCA104T	Computer Organisation	4	30	70	100	**2**	
	BCA105T	Discrete Mathematics	5	50	100	150	**3**	**16**
	BCA103P	C Programming Lab	3	15	35	50	**1**	
	BCA104P	Office Automation Lab	3	15	35	50	**1**	
		Foundation Course	3	30	70	100	**2**	
		CC&EC		50		50	**1**	
II	BCA201T	Indian Language	4	30	70	100	**2**	
	BCA202T	English	4	30	70	100	**2**	**16**
	BCA203T	Data structures	4	30	70	100	**2**	

	BCA204T	Database Management System	4	30	70	100	**2**	
	BCA205T	Numerical and Statistical Methods	5	50	100	150	**3**	
	BCA203P	Data Structures Lab	3	15	35	50	**1**	
	BCA204T	DBMS Lab	3	15	35	50	**1**	
		Foundation Course	3	30	70	100	**2**	
		CC&EC		50		50	**1**	
III	BCA301T	Indian Language	4	30	70	100	**2**	16
	BCA302T	English	4	30	70	100	**2**	
	BCA303T	Object oriented Programming using C++	4	30	70	100	**2**	
	BCA304T	Financial Accounting and Management	4	30	70	100	**2**	
	BCA305T	Operating System	5	50	100	150	**3**	
	BCA303P	C++ Lab	3	15	35	50	**1**	
		Foundation Course	3	30	70	100	**2**	
		CC&EC		50		50	**1**	
	BCA304T	Tally Lab	3	15	35	50	**1**	
IV	BCA401T	Indian Language	4	30	70	100	**2**	16
	BCA402T	English	4	30	70	100	**2**	

	BCA403T	VB.Net Programming	4	30	70	100	**2**	
	BCA404T	Unix Shell programming	4	30	70	100	**2**	
	BCA405T	Software Engineering	5	50	100	150	**3**	
	BCA403P	VB.Net Lab	3	15	35	50	**1**	
	BCA404T	UNIX Lab	3	15	35	50	**1**	
		Skill Development	3	30	70	100	**2**	
		CC&EC		50		50	**1**	
V	BCA501T	Data Communication and Networks	5	50	100	150	**3**	**20**
	BCA502T	Artificial Intelligence	5	50	100	150	**3**	
	BCA503T	Java Programming	4	30	70	100	**2**	
	BCA504T	Analysis and Design of Algorithms	4	30	70	100	**2**	
	BCA505T	Elective I	5	50	100	150	**3**	
	BCA504P	Java Lab	3	15	35	50	**1**	
	BCA505P	Analysis and Design of Algorithms Lab	3	15	35	50	**1**	
	BCA506P	Project	6	50	100	150	**3**	
		Skill Development Course	3	30	70	100	**2**	
VI	BCA601T	System Programming	5	50	100	150	**3**	**20**
	BCA602T	Professional and	5	50	100	150	**3**	

		Business Communication					
BCA603T	Web Programming	4	30	70	100	**2**
BCA604T	Elective 2	4	50	100	150	**3**
BCA604P	Web Programming Lab	3	15	35	50	**1**
BCA605P	Project Work	12	100	200	300	**6**
	Skill Development Course	3	30	70	100	**2**

Flexibility and Enrichment

Every year department conducts add on courses, seminars and workshops to enhance the skills of the students to compete with the industry requirements.
Conducting add on course on J2EE, Dot Net / Phython/Data Science/ Machine Learning/ Android App Development

Organization of the department

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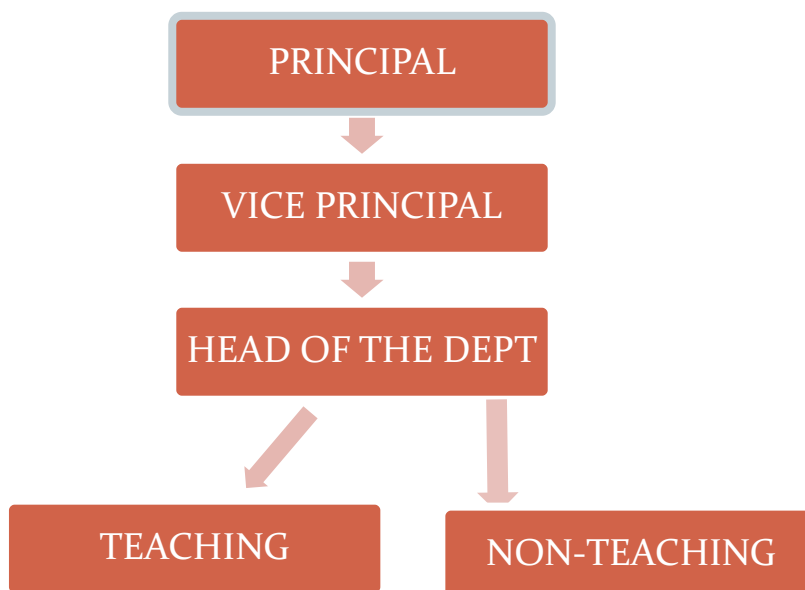
Faculty profile

Sl.No	Name of the Faculty	Designation	Qualification	Professional Experience		Area of Specialization	Member of Committee in MSRCASC
				RCASC	Outside		
1	Dr Prathiba V Kalburgi	HOD	BE,ADSE, MSc IT, PhD	13	14	Data Mining	Placement, Timetable, UG Internals, Discipline,
2	A.Malathi Palani	Asst Prof	MCA, MPhil, M.Tech, (Ph.D)	13	5	Artificial Intelligence	Web
3	Haripriya G S	Asst Prof	MSc (CS) M.Tech	11	6	OOPS using C++, Data structures	IQAC
4	Suma C	Asst Prof	MCA,MPhil	8	8	Networks and ADA	Inauguration/ Farewell , Equal Opportunity Cell
5	Lakshmipathi V	Asst Prof	MSc (CS), (MBA)	8	1	Networks	Sports, Attendance
6	Sri Vidhya R	Asst Prof	MCA	3	11	Web Technologies	Cultural
7	Dhanashree Vaishali	Asst Prof	MSc, MPhil	3	11	Software Engineering	Womens, Internals

Policies of the department

a)   **Attendance**

- Each class has a separate consolidated attendance register which will be calculated for each month.
- Attendance is entered in the www.campus.technology website and the students can view attendance and performance
- Students are supposed to acknowledge the consolidate attendance register at the end of the month.
- At the end of the semester student should posses seventy five percentage (75%) of attendance to appear in the university examinations.
- The students shall be informed about their attendance periodically so that the students can strive to make up the shortage.
- Each Semester is considered as a unit and the candidate has to put in a minimum attendance of 75% in each subject with a provision of condonation of 15% attendance for reasons such as medical emergencies, participation in sport, cultural activities, seminars, workshops and paper presentation etc at the level of University, State and National

b)   **Internal Assessment**

Internal marks are assessed based on the performance of the student in tests, assignments, seminars, attendance, punctuality, behavior, interaction relating to subject during class hours, approach in solving the problem - awareness, progress, creative thinking development and the overall attitude of the student.

c)   **Mentor system**

The proctorial system has been introduced for effective improvement of student - teacher relation in the college. All faculty members have been assigned a responsibility to mentor students . Batches of students (around 30) are assigned to a mentor, who is a member of the teaching staff of the College. The mentors consistently watch the progress, attendance and conduct of his/her wards. The attendance details of their wards are calculated every month by the class teachers. The students are advised to keep constant contact, with their mentor who is there to guide them in their academic and allied activities.

d)   **Parent teacher meeting**

Every year parent teacher meeting will be conducted once in a semester.

e) Department library

Library books are issued to students for a period of one week. E-library facility is also available in the department.

f) Lab instructions

- Students are not allowed to carry the bags inside the lab.
- Loitering and throwing litter in the lab is strictly prohibited
- Usage of mobile phones with in the lab is restricted.
- Usage of social networking sites are prohibited.
- Pen drives and external data devices are not allowed.
- While leaving the lab log off the systems and arrange the chairs.
- A student must take care of lab equipments and is expected to protect it from getting Damaged /vandalized.
- Do not personalize the computer settings.
- Do not download games, music etc.
- Students should carry lab observations during the lab hours.
- Fans and lights should be switched off after the use.
- Usage of internet during the lab hours is restricted.
- Log in with username and password given by the admin.

g) Projects

- Academic projects are assigned to the students in the final year to develop interpersonal and real time development skills.
- Fifth semester students will be given the mini project where the student are supposed to do a mini project with the basic technology.
- Sixth semester students are supposed to do a real time projects with the high end technology.
- Each student is been assigned a project guide
- Students are supposed to submit the project report as per the specification given by the Guide

h) Exams

- Students should possess 75% attendance to take up the university exams
- Indulging in Malpractice in any examination will automatically disqualify the student from the examination and it may result in the student being expelled from the College.
- Uniform is compulsory for two days a week and also during practical examinations.
- Lab records should be duly signed and attested by the respective incharge and HOD before the due date.

Rules and responsibilities of the students

- Use of Cell Phones on the campus is strictly prohibited. If a student is found using the Cell Phone, the Cell Phone will be confiscated.
- Uniform is compulsory twice a week for all the students.
- Each student shall conduct himself/herself in a manner befitting his/her association with the department.
- He/She is expected not to indulge in any activity, which is likely to bring disrepute to the department.
- He/She should show due respect and courtesy to the teachers, administrators of the department and maintain cordial relationships with fellow students.
- Property or belongings of fellow students, disturbing others in their studies, adoption of unfair means during examinations, breach of rules and regulations of the college, noisy and unruly behavior and similar other undesirable activities shall constitute violation of code of conduct for the student.
- Ragging in any form is strictly prohibited and is considered a serious offence. It may lead to his/her expulsion from the college.
- In case of any problem, a student is expected to first meet their proctor and then Head of the Department.

Instructions to parents and guardians

- Parents/guardians are requested to communicate with the proctor minimum twice in a semester.
- They are requested to go through the college website www.msrcasc.edu.in wherein there is a link www.campus.technology which specifies the students performance and attendance of their ward . If the student is absent for continues 2 days in each subject an sms goes to the parents

Department social responsibility

a. Neighborhood : Conduct computer awareness programs for government school children
b. Environmental issues: E-waste disposal in a proper manner

Research and Consultancy

Research is not a part of BU norms for UG course. However students are encouraged to take active participation in attending seminars, conferences, to develop the online projects to enhance their skills. In future we can plan to have research activities.

Best practices

The value added courses are conducted for students & staff. The proctor system is maintained to take care of the students performance, allowing the students to participate in the "inter college fest" conducted at various institutions. Allowing the students to participate in all the sports events. Conducting seminars, conferences & workshops in every semester to the students on modern technology to update their knowledge.

The knowledge gained from the program of the Department is absolutely rewarding and satisfactory in terms of meeting their professional requirements, especially when compared with fellow graduates from other relevant departments.

Department of Computer Science

Goal

Help students develop problem-solving skills, especially those required to analyze, design and implement solutions involving the use of a computer. Prepare students for continued learning in a rapidly changing discipline.

Objective

Our department engages in educating in the fields of computer systems, centered on programming languages, visual information, computer architecture, software engineering, systems development, and application systems.