



ST.ANN'S COLLEGE FOR WOMEN

(Affiliated to Acharya Nagarjuna University,
Recognised under 2(f) UGC Act 1956, New Delhi)

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Criterion: I

Metric: 1.1.1



Criterion –I

1.1.1 CURRICULUM PLANING AND IMPLEMENTATION

COURSE STRUCTURE UNDER CBCS PATTERN

A.P. STATE COUNCIL OF HIGHER EDUCATION

GUIDELINES FOR THE REVISED CHOICE BASED CREDIT SYSTEM CBCS(W.E.F 2020-21)

I. Preamble:

Choice Based Credit System (CBCS) was introduced, under the aegis of Andhra Pradesh State Council of Higher Education (APSCHE), at the insistence of the University Grants Commission, for the general undergraduate programmes, i.e., BA, BCom, BSc, BCA, BBA, UG Honours etc., by the affiliating universities in all government, aided and private degree colleges in the state of Andhra Pradesh in 2015 -2016.

The system of CBCS has been in vogue for the undergraduate programmes in all the advanced countries for several decades and proved to be advantageous to the students of higher education because of its features like courses in place of papers, availability of diverse courses, scope for choice, weightages with credits, space for multiple kinds of teaching, learning and assessing methods which can effectively cater to the diverse needs of students.

As the existing CBCS would be completing five years by 2019-20, the APSCHE decided to revise and strengthen the scheme while addressing the following issues.

- a. Overcoming the shortages in the existing system.
- b. Consolidating the system in its true spirit by providing multiple choices in domain as well as general courses.
- c. Revising the curricular framework wherever needed.
- d. Orienting syllabus to the course outcomes as advised by UGC
- e. Updating of syllabus to match to the present needs
- f. Replacing papers with courses
- g. Introducing better skill-oriented courses to align with the emerging and employment areas.

For carrying out the above task, the APSCHE constituted a Committee for recommending revised curricular framework and updated syllabus of UG

Programmes,

B.A., B.Com., B.Sc., BCA, BBA, UG Honours etc., under CBCS pattern from the year 2020-21.

Based on the recommendations of the Committee, the following Guidelines are formulated.

These Guidelines of Curricular Framework with revised Choice Based Credit System comes into effect from the academic year 2020 – 2021, to be strictly adhered for all Undergraduate Programmes offered in Affiliated Colleges and Autonomous Colleges.

1. The Curricular Framework for UG – Arts; UG – Science and UG – Commerce are appended as Annexures – I, II & III respectively.
2. **Life Skill Courses:** There will be 4 Life Skill Courses in place of earlier 10 foundation courses with the same hours, credits and maximum marks. The objective is to inculcate the required simple life-long skills. While the course in ‘Environmental Education’ continued to be mandatory, in case of others, students can opt one out of three courses, unlike in the existing system, where no choice is being given to students.

3. **Skill Development Courses:** A new set of 4 Skill Development Courses will be offered with 2 hours of teaching per week, two credits, 50 maximum marks and only external assessment. These courses are intended to train students in broad-based multiple career oriented general skills, in Arts, Commerce and Science streams but open to all students. A wider choice is given to students as they can choose 1 course from a total of 6 courses (2 from each stream).
4. The preferred departments for teaching LSCs and SDCs are appended.
5. To ensure accountability among the teachers teaching LSCs and SDCs courses, the workload of these is to be reckoned for the calculation of workload of teachers.
6. **Core Courses:** Three core courses of Domain subjects will be in the first three semesters, and the fourth and fifth courses will be in the fourth semester. Two domain SECs will be in the fifth semester. There will be uniformly five Core Courses in each Domain Subject in BA and BSc, and 15 in BCom.
7. **Skill Enhancement Courses:** Two Skill Enhancement Courses will be offered for each domain subject, in Semester V. The two Skill Enhancement Courses of each domain subject will be linked for a wider basic and practical experience to students.
8. Programmes like BCA, BBA, UG Honours etc. will broadly have a similar framework as prescribed for B.Com considering them as single major subject programme.

1. Main Features of the Courses in the Revised Curricular Framework.

Subject/Course	Hours / Week Theory	Hours / Week Practicals	Total Hours	Credits	Max Marks Internal Assessment	Max Marks University Exam	Total
Life Skills Course	02	-	02	02	-0-	50	50
Skill Development Course	02	-	02	02	-0-	50	50
Language Subject	04	-	04	03	25	75	100
Domain Arts/Commerce Subject	05	-	05	04	25	75	100
Domain Science Subject	04	02	05	05 (4+1)	25	75	100
Mathematics	06	-	06	05	25	75	100

<i>Courses of</i>	<i>Sem-I</i>	<i>Sem-II</i>	<i>Sem-III</i>	<i>Sem-IV</i>	<i>Sem-V</i>
Life Skills	1 (02)	1 (02)	2 (04)		
Skill Development	1 (02)	2 (04)	1 (02)		
Language – 1	C-1 (04)	C-2 (04)	C-3 (04)		
Language – 2	C-1 (04)	C-2 (04)	C-3 (04)		
Domain Sub -1	C-1 (06)	C-2 (06)	C-3 (06)	C-4 (06)	SEC-1(06)
				C-5 (06)	SEC-2 (06)
Domain Sub -2	C-1 (06)	C-2 (06)	C-3 (06)	C-4 (06)	SEC-1(06)
				C-5 (06)	SEC-2 (06)
Domain Sub -3	C-1 (06)	C-2 (06)	C-3 (06)	C-4 (06)	SEC-1(06)
				C-5 (06)	SEC-2 (06)
Total Hours/Week	30	32	32	36	36

LIST OF LIFE SKILL COURSES

Semester	No. of Courses	Choices	Preferred Teaching Dept.
I	01	Computer Applications	Computers
		Human Values and Professional Ethics	English/Telugu/Any Dept
		Entrepreneurship	Commerce
II	01	Information and Communication Technology	Computers
		Indian Culture and Science	History/Telugu
		Elementary Statistics	Statistics/Maths/Economics/Commerce
III	02	Health and Hygiene	Zoology/Botany
		Personality Development and Leadership	English/ Any Dept
		Analytical Skills	Maths/Statistics
		Environmental Education	Botany/Zoology/Environmental Sciences/Any Dept.

**List of Skill Development Courses along with their Semester-wise allotment with choices.
Preferred Teaching Departments are given in the parenthesis.**

Sem	No. of Courses	Stream – A (Arts)	Stream – B (Commerce)	Stream – C (Science)
I	01	Tourism Guidance(History) Public Relations (Pol Sci /English)	Secretaryship InsurancePromotion	Electrical Appliances (Physics) Plant Nursery (Botany)
II	02	Journalistic Reporting (English) Survey & Reporting (Economics/History) Social Work Methods (Pol Sci) Performing Arts (Telugu)	Agricultural Marketing Business Communication (English) Advertising Logistics & Supply Chain	Solar Energy (Physics) Fruit & Vegetable Preservation (Botany) Dairy Techniques (Zoology) Food Adulteration (Chemistry)
III	01	Financial Markets (Economics) Disaster Management (English /Telugu)	Online Business Retailing	Environment Audit (Chemistry) Poultry Farming (Zoology)

Hours, Credits and Marks for BA, BCom & BSc: The details of hours, credits and marks for BA and BSc are
B.Sc. Programme:

Sem	Domain Sub	Course	Hours/wk Theo+Pra	Credits	Max Marks	Remarks
V	1 (ex. Botany)	Course – 6	3+3	3+2	100 +50	
		Course – 7	3+3	3+2	100 +50	
	2 (ex. Microbiology)	Course – 6	3+3	3+2	100 +50	
		Course – 7	3+3	3+2	100 +50	
	3 (ex. Chemistry)	Course – 6	3+3	3+2	100 +50	
		Course – 7	3+3	3+2	100 +50	

B.Com. Programme:

Sem	Domain Sub	Course	Hours/wk	Credits	Max Marks	Remarks
V	Commerce Area-1	Course – 16	5	4	100	
		Course – 17	5	4	100	
	Commerce Area-2	Course – 18	5	4	100	
		Course – 19	5	4	100	
	Commerce Area-3	Course – 20	5	4	100	
		Course – 21	5	4	100	

Examination and Evaluation:

The college follows evaluation system based on Continuous Internal Assessment (CIA) and Semester End Examination (SEE). All eligible students have to pay the prescribed fee for both theory as well as practical examinations. No student is allowed to take examination without payment of the fee.

Theory: The 75 marks allotted for each theory Paper in a semester shall be distributed with 25:75 weightage between CIA and SEE.

CIA: It consists of tests, assignment and other modes of continuous evaluation methods along with regular attendance during the semester. 25 Marks for CIA are distributed as follows:

S.No	Category	Marks
1.	Mid Test-1 & Mid Test-2 (Best of two)	15
2.	Assignments / Seminars	5
3.	Attendance	5
Total Marks for CIA		25

ANDHRA PRADESH STATE COUNCIL OF HIGHER EDUCATION
 (A Statutory body of the Government of Andhra Pradesh)
 Revised UG Syllabus Under CBCS
 (Implemented from Academic Year 2020-21)
 PROGRAMME: FOUR YEAR B.Sc. (Hons)
 Domain Subject: **COMPUTER SCIENCE**

**Structure of Computer Science /Information Technology
(IT)**

Programme: B.Sc. with Computer Science as one of the Core Subjects.

Discipline: Computer Science

Year	Semester	Paper Code	Subject	Hrs. per Week	Credits	CIA	ES	Total
First Year	I	C1	Problem Solving in C	4	3	25	75	100
	I	C1-P	Problem Solving in C Lab	2	2		50	50
	II	C2	Data Structures using C	4	3	25	75	100
	II	C2-P	Data Structures using C Lab	2	2		50	50
Second Year	III	C3	Database Management System	4	3	25	75	100
	III	C3-P	Database Management System Lab	2	2		50	50
	IV	C4	Object Oriented Programming using Java	4	3	25	75	100
	IV	C4-P	Object Oriented Programming using Java Lab	2	2		50	50
	IV	C5	Operating Systems	4	3	25	75	100
	IV	C5-P	Operating Systems Lab using C/Java	2	2		50	50

Skill Enhancement Courses (SECs) for Semester V, from 2022-23 (Syllabus with Learning Outcomes, References, Co-curricular Activities)

Structure of SECs for Semester – V

(To choose one pair from the three alternate pairs of SECs)

Univ Code	Course Number 6 & 7	Name of Course	Hours/ Week Theo+Prac	Credits Theo+Prac	Marks	
					CIA – 20 Filed Work 05	Sem End
	6A	Web Interface Designing Technologies	3 + 3	3+ 2	25	75
	7A	Web Applications Development using PHP& MYSQL	3 + 3	3 + 2	25	75
OR						
	6B	Internet of Things	3 + 3	3+ 2	25	75
	7B	Application Development using Python	3 + 3	3 + 2	25	75
OR						
	6C	Data science	3 + 3	3+ 2	25	75
	7C	Python for Data science	3 + 3	3 + 2	25	75

Note-1: For Semester–V, for the domain subject Computer Science **any one** of the **three** pairs of SECs shall be chosen as courses 6 and 7, i.e., 6A & 7A or 6B & 7B or 6C & 7C. The pair shall not be broken (ABCD allotment is random, not on any priority basis).

Note-2: One of the main objectives of Skill Enhancement Courses (SEC) is to inculcate field related skills of the domain subject in students. The syllabus of SEC will be partially skill oriented. Hence, teachers shall also impart practical training to students on the skills embedded in syllabus citing related real field situations.

ANDHRA PRADESH STATE COUNCIL OF HIGHER EDUCATION

REVISED UG SYLLABUS UNDER CBCS
(Implemented from Academic Year, 2020-21)
PROGRAMME: FOUR YEAR B.Sc.(Hons)
Domain Subject: **CHEMISTRY**

B.Sc. Chemistry Revised Syllabus under CBCS w.e.f. 2020-21

Structure of Chemistry Core Syllabus under CBCS

YEAR	SEMESTER	COURSE	TITLE	MARKS	CREDITS
I	I	I	Inorganic and Physical Chemistry	100	03
			Practical – I Analysis of SALT MIXTURE	50	02
	2	II	Organic and General Chemistry	100	03
			Practical – II Volumetric Analysis	50	02
II	3	3	Organic Chemistry and Spectroscopy	100	03
			Practical – III Organic preparations and IR Spectral Analysis	50	02
	4	4	Inorganic, Organic and Physical Chemistry	100	03
			Practical – IV Organic Qualitative analysis	50	02
		5	Inorganic and Physical Chemistry	100	02
			Practical-V Course Conductometric and Potentiometric Titrimetry	50	02

Skill Enhancement Courses (SECs) for Semester V, from 2022-23 (Syllabus with Learning Outcomes, References, Co-curricular Activities & Model Q.P. Pattern)

Structure of SECs for Semester-V

(To choose One pair from the Five alternate pairs of SECs)

Univ. Code	Course NO. 6&7	Name of Course	Th.Hrs ./ Week	CIA Marks	EE Marks	Credits	Prac. Hrs./ Wk	Marks	Credits
	6A	Synthetic Organic Chemistry	3	25	75	3	3	50	2
	7A	Analysis of Organic Compounds	3	25	75	3	3	50	2

OR

	6B	Analytical Methods in Chemistry-1	3	25	75	3	3	50	2
	7B	Analytical Methods in Chemistry-1	3	25	75	3	3	50	2

OR

	6C	Industrial Chemistry-1	3	25	75	3	3	50	2
	7C	Industrial Chemistry-2	3	25	75	3	3	50	2

OR

	6D	Environmental Chemistry	3	25	75	3	3	50	2
	7D	Green Chemistry and Nanotechnology	3	25	75	3	3	50	2

OR

	6E	Analytical Methods in Chemistry	3	25	75	3	3	50	2
	7E	Cosmetics and Pharmaceutical Chemistry	3	25	75	3	3	50	2

Note-1: For Semester-V, for the domain subject Chemistry, any one of the five pairs of SECs shall be chosen as courses 6 and 7, i.e., 6A&7A or 6B&7B or 6C&7C or 6D&7D or 6E&7E. The pair shall not be broken (ABC allotment is random, not on any priority basis).

Note-2: One of the main objectives of Skill Enhancement Courses (SEC) is to inculcate skills related to the domain subject in students. The syllabus of SEC will be partially skill oriented. Hence, teachers shall also impart practical training to students on the skills embedded in syllabus citing related real field situations.

REVISED UG SYLLABUS UNDER CBCS
(Implemented from Academic Year 2020-21)
PROGRAMME: FOUR YEAR B.Sc. (Hons)
Domain Subject: **BOTANY**

S. No.	Semester	Title of the Course (Paper)	Hours /week	Max. Marks (SEE)	Marks in CIA	Credit s
1.	Sem.-I/ Course-1	Fundamentals of Microbes and Non-vascular Plants	04	75	25	03
	Course-1 Practical	Fundamentals of Microbes and Non-vascularPlants	03	Max. Marks-50 Internal assessmentat Semester end		02
2.	Sem.-II/ Course-2	Basics of Vascular plants and Phytogeography	04	75	25	03
	Course-2 Practical	Basics of Vascular plants and Phytogeography	03	Max. Marks-50 External assessment at Semester end		02
3.	Sem.-III/ Course-3	Anatomy and Embryology of Angiosperms, Plant Ecology and Biodiversity	04	75	25	03
	Course-3 Practical	Anatomy and Embryology of Angiosperms, Plant Ecology and Biodiversity	03	Max. Marks-50 Internal assessmentat Semester end		02
4.	Sem.-IV Course-4	Plant Physiology and Metabolism	03	75	25	03
	Course-4 Practical	Plant Physiology and Metabolism	03	Max. Marks-50 External assessment at Semester end		02
5.	Sem.- IV Course- 5	Cell Biology, Genetics and Plant Breeding	04	75	25	03
	Course-5 Practical	Cell Biology, Genetics and Plant Breeding	03	Max. Marks-50 External assessment at Semester end		02
6.	Sem.– V Course – 6 & 7	Domain related Skill Enhancement Courses (02) - Three (3) pairs of courses (each pair has2 related courses) will be offered, student has to choose a pair of courses.	03	75	25	03
			03	Max. Marks-50 Internal assessmentat Semester end		02
			03	75	25	03
			03	Max. Marks-50 Internal assessmentat Semester end		02

Skill Enhancement Courses (SECs) for Semester V, from 2022-23 (Syllabus with Learning Outcomes, References, Co-curricular Activities & Model Q.P. Pattern)

Structure of SECs for Semester – V

(To choose One pair from the Four alternate pairs of SECs)

Univ. Code	Course NO. 6 & 7	Name of Course	Th. Hrs. / Week	CIA Marks	EE Marks	Credits	Prac. Hrs./ Wk	Marks	Credits
	6A	Plant Propagation	3	25	75	3	3	50	2
	7A	Seed Technology	3	25	75	3	3	50	2

OR

	6B	Vegetable Crops – Cultivation Practices	3	25	75	3	3	50	2
	7B	Vegetable Crops – Post Harvest Practices	3	25	75	3	3	50	2

OR

	6C	Plant Tissue Culture	3	25	75	3	3	50	2
	7C	Mushroom Cultivation	3	25	75	3	3	50	2

OR

	6D	Gardening and Landscaping	3	25	75	3	3	50	2
	7D	Agroforestry	3	25	75	3	3	50	2

Note-1: For Semester–V, for the domain subject Botany, any one of the four pairs of SECs shall be chosen as courses 6 and 7, i.e., 6A & 7A or 6B & 7B or 6C & 7C or 6D & 7D. The pair shall not be broken (ABCD allotment is random, not on any priority basis).

Note-2: One of the main objectives of Skill Enhancement Courses (SEC) is to inculcate skills related to the domain subject in students. The syllabus of SEC will be partially skill oriented. Hence, teachers shall also impart practical training to students on the skills embedded in syllabus citing related real field situations.

A.P. STATE COUNCIL OF HIGHER EDUCATION B.A./B.Sc. MATHEMATICS
REVISED SYLLABUS FOR CORE COURSES

CBCS/ SEMESTER SYSTEM
(w.e.f. 2020-21 Admitted Batch)

CORE COURSES STRUCTURE
(Sem-I to Sem-IV)

Course	Subject	Hrs	Credits	CIA	ES	Total
Course-I	Differential Equations & Differential Equations Problem Solving Sessions	6	5	25	75	100
Course-II	3- dimensional Analytical Solid geometry & 3- dimensional Analytical Solid Geometry Problem Solving Sessions	6	5	25	75	100
Course-III	Abstract Algebra & Abstract Algebra Problem Solving Sessions	6	5	25	75	100
Course-IV	Real Analysis & Real Analysis Problem Solving Sessions	6	5	25	75	100
Course-V	Linear Algebra & Linear Algebra Problem Solving Sessions	6	5	25	75	100

ANDHRAPRADESH STATE COUNCIL OF HIGHER EDUCATION
(A Statutory body of the Government of Andhra Pradesh)
REVISED UG SYLLABUS UNDER CBCS
(Implemented from Academic Year - 2020-21)
PROGRAMME: FOUR YEAR B.A. /B.Sc. (Hons)

Domain Subject:
MATHEMATICS

Skill Enhancement Courses (SECs) for Semester V, from 2022-23 (Syllabus with Learning Outcomes, References, Co-curricular Activities & Model Q.P. Pattern)

*Structure of SECs for
Semester-V*

(To choose One pair from the Three alternate pairs of SECs)

Univ Code	Course Number 6&7	Name of Course	Hours/ Week	Credits	Marks	
					CIA-20 Filed Work 05	Sem End
	6A	Numerical Methods	6	5	25	75
	7A	Mathematical Special Functions	6	5	25	75

OR

	6B	Multiple integrals and Applications of Vector Calculus	6	5	25	75
	7B	Integral transforms with Applications	6	5	25	75

OR

	6C	Partial Differential Equations and Fourier Series	6	5	25	75
	7C	Number theory	6	5	25	75

Note-1: For Semester-V, for the domain subject Mathematics, any one of the three pairs of SECs shall be chosen as courses 6 and 7, i.e., (6A & 7A) or (6B & 7B) or (6C & 7C), the pair shall not be broken. A, B, C allotment is random, not on any priority basis.

Note-2: One of the main objectives of Skill Enhancement Courses (SEC) is to inculcate skills related to the domain subject in students. The syllabus of SEC will be partially skill oriented. Hence, teachers shall also impart practical training to students on the skills embedded in the syllabus citing related real field situations.

AP STATE COUNCIL OF HIGHER EDUCATION

B.Sc. PHYSICS SYLLABUS UNDER CBCS

[For Mathematics combinations]

w.e.f. 2020-21 (Revised in May 2020)

First Semester

Course I: Mechanics, Waves

and Oscillations Practical

Course I (Lab-1)

Second Semester

Course II:

Wave Optics

Practical

Course II

(Lab-2)

Third Semester

Course III: Heat and

Thermodynamics Practical

Course III (Lab-3)

Fourth Semester

Course IV: Electricity, Magnetism

and Electronics Practical Course

IV (Lab- 4)

Course

V: Modern

Physics

Practical

Course V

(Lab-V)

B.Sc. PHYSICS COURSE STRUCTURE UNDER CBCS

<i>Year</i>	<i>Semest er</i>	<i>Cours e</i>	<i>Title of the Course</i>	<i>Marks</i>	<i>No. of Hrs /Week</i>	<i>No. of Credits</i>
I	I	I	Mechanics, Waves and Oscillations	100	4	03
			Practical Course- I	50	2	02
	II	II	Wave Optics	100	4	03
			Practical Course – II	50	2	02
II	III	III	Heat and Thermodynamics	100	4	03
			Practical Course – III	50	2	02
	IV	IV	Electricity, Magnetism and Electronics	100	4	03
			Practical Course – IV	50	2	02
		V	Modern Physics	100	4	03
			Practical Course –V	50	2	02
			Total No. of Courses : 05 (Five)			

REVISED UG SYLLABUS UNDER CBCS **ANDHRA PRADESH STATE**
COUNCIL OF HIGHER EDUCATION
 (A Statutory body of the Government of Andhra Pradesh)

(Implemented from Academic Year 2020-
 21) PROGRAMME: FOUR YEAR B.Sc.
 (Hons)
Domain Subject: **PHYSICS**

Skill Enhancement Courses (SECs) for Semester V, from 2022-23
*(Syllabus with Learning Outcomes, References, Co-curricular Activities &
 Model Q.P. Pattern)*

Structure of SECs for Semester–V
(To choose one pair from the three alternate pairs of SECs)

Univ. Code	Course No. 6&7	Name of Course	Th. Hrs / Week	CIA Marks	EE Marks	Credits	Prac Hrs/ Wk	Marks	Credits
	6A	Optical Instruments and Optometry	3	25	75	3	3	50	2
	7A	Optical Imaging and Photography	3	25	75	3	3	50	2

OR

	6B	Low Temperature Physics & Refrigeration	3	25	75	3	3	50	2
	7B	Solar Energy and Applications	3	25	75	3	3	50	2

OR

	6C	Applications of Electricity & Electronics	3	25	75	3	3	50	2
	7C	Electronic Instrumentation	3	25	75	3	3	50	2

Note-1: For Semester–V, for the domain subject Physics, any one of the above three pairs of SECs shall be chosen as courses 6 and 7, i.e., 6A & 7A or 6B & 7B or 6C & 7C. The pair shall not be broken (ABC allotment is random, not on any priority basis).

Note-2: One of the main objectives of Skill Enhancement Courses (SEC) is to inculcate skills related to the domain subject in students. The syllabus of SEC will be partially skill oriented. Hence, teachers shall also impart practical training to students on the skills embedded in syllabus citing related real field situations.



ANDHRA PRADESH STATE COUNCIL OF HIGHER EDUCATION

(A Statutory body of the Government of Andhra Pradesh)

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REVISED SYLLABUS OF B Com (GENERAL AND COMPUTER APPLICATIONS) UNDER CBCS FRAMEWORK WITH EFFECT FROM 2020-2021

PROGRAMME: THREE-YEAR B Com

(General and Computer Applications)

*(With Learning Outcomes, Unit-wise Syllabus, References, Co-curricular Activities & Model
Q.P.)*

For Fifteen Courses of 1, 2, 3 & 4 Semesters)

(To be Implemented from 2020-21 Academic Year)

ANDHRA PRADESH STATE COUNCIL OF HIGHER EDUCATION

(A Statutory body of the Government of Andhra Pradesh)

CBCS – UG SYLLABUS SUBJECT REVIEW COMMITTEE**(To be implemented from the Academic Year 2020-21)****PROGRAMME: Three-Year BCom** (General and Computer Applications)**Domain Subject: Commerce*****(Syllabus with Outcomes, Co-curricular Activities, References for Fifteen Courses of 1, 2, 3 & 4 Semesters)*****Structure of COMMERCE Syllabus under CBCS for 3-year B Com****Programme (with domain subject covered during the first 4 Semesters with 15 Courses)**

Sl. No	Code	Sem	Courses	Name of Course (Each Course consists 5 Units with each Unit having 12 hours of class-work)	Hours/ Week	Credits	Marks	
							CIA	Sem End
1		I	1A	Fundamentals of Accounting (Gen & CA)	5	4	25	75
2		I	1B	Business Organization and Management (Gen & CA)	5	4	25	75
3		I	1C	Business Environment (Gen)/ Information Technology (CA)	5	4	25	75
4		II	2A	Financial Accounting (Gen & CA)	5	4	25	75
5		II	2B	Business Economics (Gen & CA)	5	4	25	75
6		II	2C	Banking Theory & Practice (Gen)/ E-commerce and Web Designing (CA)	5	4	25	75
7		III	3A	Advanced Accounting (Gen & CA)	5	4	25	75
8		III	3B	Business Statistics (Gen & CA)	5	4	25	75
9		III	3C	Marketing (Gen)/ Programming with C & C++ (CA)	5	4	25	75
10		IV	4A	Corporate Accounting (Gen & CA)	5	4	25	75
11		IV	4B	Cost and Management Accounting (Gen & CA)	5	4	25	75
12		IV	4C	Income Tax (Gen & CA)	5	4	25	75
13		IV	4D	Business Laws (Gen & CA)	5	4	25	75
14		IV	4E	Auditing (Gen & CA)	5	4	25	75
15		IV	4F	Goods and Service Tax (Gen)/ Data Base Management System (CA)	5	4	25	75
				Total	75	60	375	1125

(Gen & CA) B Com (General) and B Com (Computer Applications)

Domain Subject: Commerce
Structure of SECs for Semester– V

(To choose Three pairs from the Nine alternate pairs
of SECs)(For each SEC: Hours/Week: 05, Credits: 4,
Max Marks: 100)

Pairs of Skill Enhancement Courses (SEC) under each series in Commerce for Semester-V.

Course No.	Series-A: Accountancy	Course No.	Series-B: Services	Course No.	Series-C: E commerce
	Course Name		Course Name		Course Name
16-A	Advanced Corporate Accounting	16-B	Advertising and Media Planning	16-C	Digital Marketing
17-A	Software Solutions to Accounting	17-B	Sales Promotion and Practice	17-C	Service Marketing

18-A	Management Accounting	18-B	Logistics Services and Practice	18-C	Income Tax Procedure& Practice
19-A	Cost Control Techniques	19-B	EXIM Procedure and practice	19-C	GST Procedure &Practice

20-A	Stock Markets	20-B	Life Insurance with Practice	20-C	E Commerce
21-A	Stock Market Analysis	21-B	General Insurance with practice	21-C	E filing

Note-1: In Semester-V a B.Com. General students have to study Three pairs of SECs (a total of 6courses). The Pairs are, SEC numbers 16 & 17, 18 & 19 and 20 &21.As there shall be choice to students under CBCS, a total of 9 pairs shall be offered from which B.Com. General students have to choose a total of Three pairs of SECs.

The 9 pairs are from 3 series namely (A) Accountancy, (B) Services and (C) E-Commerce. Students can, however, choose their **Three pairs** from any of the **Nine** pairs but a pair shall notbe broken.

For example students can choose any Three pairs like the following;
16-A &17-A (from Accountancy), 18-B, 19-B (from Services) and 20-C, 21-C from E-Commerce.

Or 16-A&17-A, 18-C &19-C and 20-B &21-B Or 16-B &17-B, 18-A &19-A and 20-C &21-C Or 16-B &17-B, 18-C &19-Cand 20-A &21-A Or 16-C &17-C, 18-B & 19-B and 20-A &21-A Or 16-C &17-C, 18-A &19-A and 20-B, 21-B

Whereas, B.Com Computers Students can choose any two pairs from the above 9 pairs.

Note-2: One of the main objectives of Skill Enhancement Courses (SEC) is to inculcate skills related to the domain subject in students. The syllabus of SEC will be partially skill oriented. Hence, teachers shall also impart practical training to students on the skills embedded insyllabus citing related real field situations.

ANDHRAPRADESH STATE COUNCIL OF HIGHER EDUCATION
(A Statutory body of the Government of Andhra Pradesh)

REVISED UG SYLLABUS UNDER CBCS
(Implemented from Academic Year -
2020-21) PROGRAMME: FOUR YEAR
B.A./B.Com (Hons)

Domain Subject: Computer Applications for Arts/Commerce
Skill Enhancement Courses (SECs) for Semester V, from 2022-23 (Syllabus/Curriculum)

Pair Options of SECs for Semester-V
(To choose One pair from the Four alternate pairs of SECs)

Univ. Code	Course NO. 6&7	Name of Course	Hrs. / Week	CIA Marks	Max Marks EE	Credits
	6A	Big data Analytics using R	5	25	75	4
	7A	Data Science using Python	5	25	75	4

OR

	6B	Mobile application development	5	25	75	4
	7B	Cyber security and malware analysis	5	25	75	4

OR

	6C	E-commerce application development	5	25	75	4
	7C	Real time governance system(RTGS)	5	25	75	4

OR

	6D	Multimedia Tools and Applications	5	25	75	4
	7D	Digital imaging	5	25	75	4

Note-1: For Semester-V, for the domain subject Computer Applications, any one of the above four pairs of SECs shall be chosen as courses 6 and 7, i.e., 6A & 7A or 6B & 7B or 6C & 7C or 6D & 7D. The pair shall not be broken (ABCD allotment is random, not on any priority basis).

Note-2: One of the main objectives of Skill Enhancement Courses (SEC) is to inculcate practical skills related to the domain subject in students. The syllabus of SEC will be partially skill oriented. Hence, teachers shall also impart practical training to students on the skills embedded in syllabus citing related real field situations.

Note-3: Since, the proposed SECs are connected to Computer Programming/Software Tools and Skill enhancement, the students need to get exposure on the syllabus content by practicing on the computer even though there is no formal assignment of credits and laboratory hours for practical sessions. So, as part of the Co-curricular activities and continuous assessment, students should be engaged in practicing on computer for at least 15 hours per subject/course.

B. Com – Semester – 1

Sl. No	Course	Name of the Subject	Total Marks	CIA Exams	Sem. End Exam	Teaching Hours	Credits
1	First Language	English	100	25	75	4	3
2	Second Language	Telugu/Hindi/Urdu/Sanskrit	100	25	75	4	3
3	Foundation course - 1	Human Values & Professional Ethics (HVPE)	50	---	50	2	2
4	Foundation course - 2	Environmental Studies	50	---	50	2	2
5	DSC 1A	Accounting - 1	100	25	75	5	4
6	DSC 2A	Business Organization & Management	100	25	75	5	4
7	DSC 3A	Computer Fundamentals & Photoshop	100	25	75	5	4
TOTAL			600	125	475	27	22

B. Com – Semester – II

Sl. No	Course	Name of the Subject	Total Marks	CIA Exams	Sem. End Exam	Teaching Hours	Credits
1	First Language	English	100	25	75	4	3
2	Second Language	Telugu/Hindi/Urdu/Sanskrit	100	25	75	4	3
3	Foundation course – 3A	Information & Communication Technology - 1	50	---	50	2	2
4	Foundation course – 4A	Communication & Soft Skills -1	50	---	50	2	2
5	DSC 1A	Accounting – II	100	25	75	5	4
6	DSC 2A	Business Economics	100	25	75	5	4
7	DSC 3A	Enterprise Resource Planning	100	25	75	5	4
TOTAL			600	125	475	27	22

B. Com – Semester – III

Sl. No	Course	Name of the Subject	Total Marks	CIA Exams	Sem. End Exam	Teaching Hours	Credits
1	First Language	English	100	25	75	4	3
2	Second Language	Telugu/Hindi/Urdu/Sanskrit	100	25	75	4	3
3	Foundation course – 3B	Information & Communication Technology-2	50	---	50	2	2
4	Foundation course – 4B	Communication & Soft Skills	50	---	50	2	2
5	DSC 1C	Corporate Accounting	100	25	75	5	4
6	DSC 2C	Business Statistics	100	25	75	5	4
7	DSC 3C	Office Automation Tools	100	25	75	5	4
TOTAL			600	125	475	27	22

B. Com – Semester – IV

Sl. No	Course	Name of the Subject	Total Marks	CIA Exams	Sem. End Exam	Teaching Hours	Credits
1	Foundation course –4C	Communication & Soft Skills	50	---	50	2	2
2	Foundation course – 5#	Analytical Skills	50	---	50	2	2
3	Foundation course – 6	Entrepreneurship Education	50	---	50	2	2
4	Foundation course – 7	Leadership Education	50	---	50	2	2
5	DSC 1D	Banking Theory & Practice	100	25	75	5	4
6	DSC 2D	Business Laws	100	25	75	5	4
7	DSC 3D	Business Analysis	100	25	75	5	4
TOTAL			500	75	425	23	20

B. Com – Semester – V

Sl. No	Course	Name of the Subject	Total Marks	CIA Exams	Sem. End Exam	Teaching Hours	Credits
1	Skill Based Course SBC E	University’s choice 5.1 A Business Leadership B. Office Management C. Personal Finance D. Project Management	50	---	50	2	2
2	DSC 1E	5.2 Cost Accounting	100	25	75	5	4
3	DSC 2E	5.3 Taxation	100	25	75	5	4
4	DSC 3E	5.4 Commercial Geography.	100	25	75	5	4
5	Elective- DSC 1F/ Inter-disp.	5.5 Programming in C 5.6 Data Base Management System 5.7 Web Technology	100	25	75	5	4
6	Elective- DSC 2F/ Inter-disp.		100	25	75	5	4
7	Elective- DSC 3F/ Inter-disp.		100	25	75	5	4
TOTAL			600	125	525	27	27

B. Com – Semester – VI

Sl. No	Course	Name of the Subject	Total Marks	CIA Exams	Sem. End Exam	Teaching Hours	Credits
1	Skill Based Course SBC G	University’s choice 6.1 A Accounting Software B. Tally C. Event Management D. Media Management	50	---	50	2	2
2	DSC 1G	6.2 Marketing	100	25	75	5	4
3	DSC 2G	6.3 Auditing	100	25	75	5	4
4	DSC 3G	6.4 Management Accounting	100	25	75	5	4
5	Elective- DSC 1H/ Inter-disp.	6.5 Tally 6.6 e-Commerce 6.7 PHP and My SQL	100	25	75	5	4
6	Elective- DSC 2H/ Inter-disp.		100	25	75	5	4
7	Elective- DSC 3H/ Inter-disp.		100	25	75	5	4
TOTAL			650	125	525	27	27
GRAND TOTAL			3600	700	2900	158	140



ANDHRA PRADESH STATE COUNCIL OF HIGHER EDUCATION

(A Statutory body of the Government of Andhra Pradesh)

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SYLLABUS OF BACHELOR OF COMPUTER APPLICATIONS UNDER CBCS FRAMEWORK WITH EFFECT FROM 2020-2021

PROGRAMME: THREE-YEAR B.C.A

*(With Learning Outcomes, Unit-wise Syllabus, References, Co-curricular Activities &
Model Q.P. For Fifteen Courses of 1, 2, 3 & 4 Semesters)*
(To be Implemented from 2020-21 Academic Year)

First Semester

S.No	Paper Code	Subject	Hours/ Week	No of Credits	Max. Marks CIA	Max. Marks University Exam	Total Marks
1		English – I	4	3	25	75	100
2		Language(H/T/S) – I	4	3	25	75	100
3		Life Skill Course – I	2	2	-0-	50	50
4		Skill Development Course – I	2	2	-0-	50	50
5	C1	Computer Fundamentals & Office tools	4	4	25	75	100
6	C1-P	Computer Fundamentals & Office tools-Lab	2	1	-0-	50	50
7	C2	Programming in C	4	4	25	75	100
8	C2-P	Programming in C Lab	2	1	-0-	50	50
9	C3	Numerical and Statistical Methods	4	4	25	75	100
10	C3-P	Numerical and Statistical Methods- Lab	2	1	-0-	50	50
Total			30	25	125	625	750

Second Semester

S.No	Paper Code	Subject	Hours/ Week	No of Credits	CIA Internal assessment	Max. Marks University Exam	Total Marks
1		English – II	4	3	25	75	100
2		Language(H/T/S) – II	4	3	25	75	100
3		Life Skill Course – II	2	2	-0-	50	50
4		Skill Development Course – II	2	2	-0-	50	50
5		Skill Development Course – III	2	2	-0-	50	50
6	C4	Data Structures	4	4	25	75	100
7	C4-P	Data Structures Lab	2	1	-0-	50	50
8	C5	Object Oriented Analysis & Design	4	4	25	75	100
9	C5-P	Object Oriented Analysis & Design Lab	2	1	-0-	50	50
10	C6	Database Management Systems	4	4	25	75	100
11	C6-P	Database Management Systems Lab	2	1	-0-	50	50
Total			32	27	125	675	800

Third Semester

S.No	Paper Code	Subject	Hours/ Week	No of Credits	CIA	Max. Marks University Exam	Total Marks
1		English –III	4	3	25	75	100
2		Language(H/T/S) – III	4	3	25	75	100
3		Life Skill Course – III	2	2	-0-	50	50
4		Life Skill Course – IV	2	2	-0-	50	50
5		Skill Development Course – IV	2	2	-0-	50	50
6	C7	Accounting and Financial Management	4	4	25	75	100
7	C7-P	Accounting and Financial Management Lab	2	1	-0-	50	50
8	C8	Object Oriented Programming Through Java	4	4	25	75	100
9	C8-P	Object Oriented Programming Through Java Lab	2	1	-0-	50	50
10	C9	Operating Systems	4	4	25	75	100
11	C9-P	Operating Systems Lab	2	1	-0-	50	50
Total			32	27	125	675	800

Fourth Semester

S.No	Paper Code	Subject	Hours/ Week	No of Credits	CIA	Max. Marks University Exam	Total Marks
1	C10	Cyber Laws	4	4	25	75	100
2	C10-P	Cyber Laws Lab	2	1	-0-	50	50
3	C11	Data Mining and Data Warehousing	4	4	25	75	100
4	C11-P	Data Mining and Data Warehousing Lab	2	1	-0-	50	50
5	C12	Web Programming	4	4	25	75	100
6	C12-P	Web Programming Lab	2	1	-0-	50	50
7	C13	Design of Object Oriented Applications	4	4	25	75	100
8	C13-P	Design of Object Oriented Applications Lab	2	1	-0-	50	50
9	C14	Data Analytics using R	4	4	25	75	100
10	C14-P	Data Analytics using R Lab	2	1	-0-	50	50
11	C15	Object Oriented Software Engineering	4	4	25	75	100
12	C15-P	Object Oriented Software Engineering Lab	2	1	-0-	50	50
Total			36	30	150	750	900

REVISED UG SYLLABUS UNDER CBCS
(Implemented from Academic year 2020-21)

PROGRAMME: FOUR YEAR BCA

Domain: Bachelor Computer Applications (BCA)
Skill Enhancement Courses (SECs) for Semester V, from 2022-23
Semester – V

S. No.	Paper Code	Subject	Hours per week	Credits	Max. Marks		Total Marks
					Internal	External (University Exams)	
1	SEC-1	Machine Learning Using Python	4	3	25	75	100
	SEC-1P(Lab)	Python Lab	2	2	--	50	50
2	SEC-2	Digital Imaging	4	3	25	75	100
	SEC-2P(Lab)	Digital Imaging Lab	2	2	--	50	50
3	SEC-3	Cyber Security and Malware Analysis	4	3	25	75	100
	SEC-3P(Lab)	Cyber Security and Malware Analysis Lab	2	2	--	50	50
4	SEC-4	Internet of Things	4	3	25	75	100
	SEC-4P(Lab)	Internet of Things Lab	2	2	--	50	50
5	SEC-5	Mobile Application Development	4	3	25	75	100
	SEC-5P(Lab)	Mobile Application Development Lab	2	2	--	50	50
6	SEC-6	Computer Networking and PC trouble shooting	4	3	25	75	100
	SEC-6P(Lab)	Computer Networking and PC trouble shooting Labs	2	2	--	50	50
TOTAL			36	30	150	750	900

Note-1: The Number of hours per week and credits are assigned to each course as per the course structure which was already approved at the time of finalizing the first FOUR semesters of BCA programme under CBCS by the concerned committee.

Note-2: One of the main objectives of Skill Enhancement Courses (SEC) is to inculcate practical skills related to the domain subject in students. The syllabus of SEC will be skill oriented and hence, teachers shall impart practical training to students on the skills embedded in syllabus citing related real field situations.

Note-3: Since, the proposed SECs are connected to Computer Programming/Software Tools

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and Skill enhancement, the students need to get exposure on the syllabus content by practicing on the computer. Faculty are advised to engage students in practical based assignments so as to ensure better understanding of the practical usage of the particular skill based subject in real application domain.

ACHARYA NAGARJUNA UNIVERSITY :: NAGARJUNANAGAR-522 510

BIOTECHNOLOGY

SEE: Semester End Examination -

Semester	Course Code	Title of course	Number of Credits	Number of teaching hrs	Marks		
					Internal	SEE	Total
I	BT 101	Microbiology and cell biology	4	4	25	75	100

**REVISED SYLLABUS UNDER
CBCS**

Domain : Biotechnology

**B.Sc., Biotechnology: Choice based
Credit System**

Semester	Course Code	Title of course	Number of Credits	Number of teaching hrs	Marks		
					Internal	SEE	Total
II	BTT- 201	Macromolecules and metabolism	3	5	25	75	100
II	BTP- 202	Macromolecules and enzymology lab	2	2	0	50	50
III	BTT-301	Biophysical Techniques	3	5	25	75	100
III	BTP-302	Metabolism and Biophysical Techniques lab	2	2	50	75	50
IV	BTT- 401	Immunology	3	5	25	75	100
IV	BTP- 402	Immunology lab	2	2	0	50	50

REVISED UG SYLLABUS UNDER CBCS
(Implemented from Academic Year 2020-21)
PROGRAMME: FOUR YEAR B.Sc.

Domain Subject: BIOTECHNOLOGY
Skill Enhancement Courses (SECs) for Semester V, from 2022-23
(Syllabus-Curriculum)

Structure of SECs for Semester – V
(To choose One pair from the Three alternate pairs of SECs)

Univ. Code	Courses 6&7	Name of Course	Th. Hrs/Week	IE Marks	EE Marks	Credits	Prac. Hrs/wk	Marks	Credits
	6A	Techniques in nursery development	3	25	75	3	3	50	2
	7A	Hydroponics cultivation	3	25	75	3	3	50	2

OR

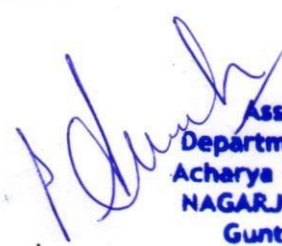
Univ. Code	Courses 6&7	Name of Course	Th. Hrs/Week	IE Marks	EE Marks	Credits	Prac. Hrs/wk	Marks	Credits
	6B	Organic Farming	3	25	75	3	3	50	2
	7B	Biofertilizers and Biopesticides production	3	25	75	3	3	50	2

OR

Univ. Code	Courses 6&7	Name of Course	Th. Hrs/Week	IE Marks	EE Marks	Credits	Prac. Hrs/wk	Marks	Credits
	6C	Apiculture	3	25	75	3	3	50	2
	7C	Pearl Culture	3	25	75	3	3	50	2

Note-1: For Semester-V, for the domain subject Biotechnology any, any one of the three pairs of SECs shall be chosen as courses 6 and 7, i.e., 6A & 7A or 6B & 7B or 6C & 7C. The pair shall not be broken (ABCD allotment is random, not on any priority basis).

Note-2: One of the main objectives of Skill Enhancement Courses (SEC) is to inculcate field skills related to the domain subject in students. The syllabus of SEC will be partially skill oriented. Hence, teachers shall also impart practical training to students on the field skills embedded in the syllabus citing related real field situations


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ANDHRA PRADESH STATE COUNCIL OF HIGHER EDUCATION
REVISED UG SYLLABUS UNDER CBCS
(Implemented from Academic Year 2020-21)
PROGRAMME: THREE YEAR B.Sc.,

ACHARYA NAGARJUNA UNIVERSITY :: NAGARJUNA NAGAR - 522 510
B.A/B.Sc., STATISTICS CBCS REVISED SYLLABUS 2020-21

Year	Semester	Paper	Subject	CIA	EA	Total
1	I	I	Descriptive Statistics	25	75	100
	II	II	Probability Theory and Distributions	25	75	100
2	III	III	Statistical Inference	25	75	100
	IV	IV	Sampling Techniques and Design of Experiments	25	75	100
		V	Applied Statistics	25	75	100

Domain Subject: STATISTICS

Skill Enhancement Courses (SECs) for Semester V, from
2022-23 (Syllabus-Curriculum)

Structure of SECs for Semester – V

(To choose one pair from the three alternate pairs of SECs)

Univ. Code	Courses 6 & 7	Name of Course	Th. Hrs. / Week	CIA Marks	EE Marks	Credits	Prac. Hrs. / Wk	Marks	Credits
	6A	Operations Research - I	3	25	75	3	3	50	2
	7A	Operations Research – II	3	25	75	3	3	50	2

OR

	6B	Statistical Process and Quality Control	3	25	75	3	3	50	2
	7B	Computational Techniques and R Programming	3	25	75	3	3	50	2

OR

	6C	Econometrics	3	25	75	3	3	50	2
	7C	Regression Analysis	3	25	75	3	3	50	2

Note-1: For Semester–V, for the domain subject Statistics, any one of the three pairs of SECs shall be chosen courses 6 and 7, i.e., 6A & 7A or 6B & 7B or 6C & 7C. The pair shall not be broken (ABC allotment is random, not on any priority basis).

Note-2: One of the main objectives of Skill Enhancement Courses (SEC) is to inculcate field skills related to the domain subject in students. The syllabus of SEC will be partially skill oriented. Hence, teachers shall also impart practical training to students on the field skills embedded in the syllabus citing related real field situations.

MASTER OF COMPUTER APPLICATIONS - MCA

Course Structure and Scheme of Examination w. e. f 2013-14

FIRST YEAR - FIRST SEMSTER

Sub Code	<u>Name of the Subject</u>	Int. Marks CIA	Ext. Marks	Total Marks	No of Credits	Hours/ Week
MCA101	Fundamentals of Computers	30	70	100	4	4
MCA102	Programming with C	30	70	100	5	4
MCA103	Computer Organization	30	70	100	5	4
MCA104	Discrete Mathematical Structures	30	70	100	5	4
MCA105	Accountancy and Financial Management	30	70	100	4	4
MCA106	PC Software Lab	30	70	100	3	6
MCA107	C Programming Lab	30	70	100	3	6
MCA108	Seminar	50	--	50	1	3
TOTAL		260	490	750	30	35

FIRST YEAR - SECOND SEMSTER

Sub Code	<u>Name of the Subject</u>	Int. Marks CIA	Ext. Marks	Total Marks	No of Credits	Hours/ Week
MCA201	Language Processors	30	70	100	4	4
MCA202	Data Base Management Systems	30	70	100	5	4
MCA203	Data Structures using C++	30	70	100	5	4

MCA204	Operating System Principles	30	70	100	5	4
MCA205	Probability & Statistics	30	70	100	4	4
MCA206	Data Structures using C++ LAB	30	70	100	3	6
MCA207	DBMS LAB	30	70	100	3	6
MCA208	Communication Skills	50	--	50	1	3
TOTAL		260	490	750	30	35

SECOND YEAR - THIRD SEMSTER

Sub Code	<u>Name of the Subject</u>	Int. Marks CIA	Ext. Marks	Total Marks	No of Credits	Hours/ Week
MCA301	Object Oriented Programming through JAVA	30	70	100	5	4
MCA302	Computer Networks	30	70	100	5	4
MCA303	Operations Research	30	70	100	4	4
MCA304	Computer Graphics	30	70	100	5	4
MCA305	Artificial Intelligence	30	70	100	4	4
MCA306	Java Programming Lab	30	70	100	3	6
MCA307	Unix Shell Programming LAB	30	70	100	3	6
MCA308	Seminar	50	--	50	1	3
TOTAL		260	490	750	30	35

SECOND YEAR - FOURTH SEMSTER

Sub Code	<u>Name of the Subject</u>	Int. Marks CIA	Ext. Marks	Total Marks	No of Credits	Hours/ Week
MCA401	Principles of Programming Languages	30	70	100	4	4
MCA402	Object Oriented Modeling and Design Using UML	30	70	100	5	4
MCA403	Web Technologies	30	70	100	5	4
MCA404	Software Engineering	30	70	100	5	4
MCA405.1	Grid and Cluster	30	70	100	4	4

405.2	Computing Cryptography and Networks Security					
405.3	Simulation Modeling and Analysis					
MCA406	Web Technologies Lab	30	70	100	3	6
MCA407	Visual Programming Lab	30	70	100	3	6
MCA408	Soft skills	50	--	50	1	3
TOTAL		260	490	750	30	35

THIRD YEAR - FIFTH SEMSTER THIRD YEAR - SIXTH SEMSTER

Sub Code	<u>Name of the Subject</u>	Int. Marks CIA	Ext. Marks	Total Marks	No of Credits	Hours/ Week
MCA501	Data Ware Housing and Data Mining	30	70	100	5	4
MCA502	.Net Programming	30	70	100	5	4
MCA503	Design and Analysis of Algorithms	30	70	100	5	4
MCA504.1	Embedded Systems	30	70	100	4	4
504.2	Mobile Computing					
504.3	Cloud Computing					
MCA505.1	Image Processing	30	70	100	4	4
505.2	Microprocessors and Interfacing					
505.3	Web Engineering					
MCA 506	.Net Programming Lab	30	70	100	3	6
MCA 507	Advanced Java Lab	30	70	100	3	6
MCA 508	Seminar	50	--	50	1	3
TOTAL		260	490	750	30	35

Sub Code	<u>Name of the Subject</u>	Int. Marks CIA	Ext. Marks	Total Marks	No of Credits	Hours/ Week
MCA601	Project Work	--	150	150	10	5 Months Duration

ACHARYA NAGARJUNA UNIVERSITY

MCA COURSE STRUCTURE

For the batch of students admitted during 2020-2021

Master of Computer Applications (MCA)										
SEMESTER I										
S.No	Course Code	Title of the Course	Instruction sHours per Week			Credits	Evaluation			TotalMarks
			L	T	P		CIA Marks	SEE		
								Marks	Duration	
1	101	Data Structures with C++	2	1	1	5	30	70	3 Hours	100
2	102	Database ManagementSystems	2	1	1	5	30	70	3 Hours	100
3	103	Probability and Statistics	3	1	0	4	30	70	3 Hours	100
4	104	Operating Systems	3	1	0	4	30	70	3 Hours	100
5	105	Computer Organization	3	1	0	4	30	70	3 Hours	100
6	106	Data Structures LAB			6	3	30	70	3 Hours	100
7	107	Database Management Systems LAB			6	3	30	70	3 Hours	100
8	108	Communication Skills		3		2	50	-		50
		Total	35			30	260	490		750
CIA – Continuous Internal Assessment						SEE – Semester End Examinations				

Master of Computer Applications (MCA)										
SEMESTER II										
S.No	Course Code	Title of the Course	Instruction sHours per Week			Credits	Evaluation			Total Marks
			L	T	P		CIA Marks	SEE		
								Marks	Duration	
1	201	Software Engineering	3	1	0	4	30	70	3 Hours	100
2	202	Programming and Problem Solving using Python	2	1	1	5	30	70	3 Hours	100
3	203	Computer Networks	3	1	0	4	30	70	3 Hours	100
4	204	Web Technologies	2	1	1	5	30	70	3 Hours	100
5	205	Artificial Intelligence	3	1	0	4	30	70	3 Hours	100
6	206	Python Programming LAB			6	3	30	70	3 Hours	100
7	207	Web Technologies LAB			6	3	30	70	3 Hours	100
8	208	Seminar		3		2	50	-		50
9		MOOCS	-			2	-	-	-	-
		Total	35			32	260	490		750
CIA – Continuous Internal Assessment						SEE – Semester End Examinations				

Master of Computer Applications (MCA)										
SEMESTER III										
S.No	Course Code	Title of the Course	Instruction sHours per Week			Credits	Evaluation			Total Mark s
			L	T	P		CIA Marks	SEE		
								Marks	Duration	
1	301	Data Mining and Big Data	3	1	0	5	30	70	3 Hours	100
2	302	Cryptography & Network Security	2	1	1	5	30	70	3 Hours	100
3	303	Cloud Computing	3	1	0	4	30	70	3 Hours	100
4	304	Machine Learning	2	1	1	4	30	70	3 Hours	100
5	305.1	Mobile Computing with Android	3	1	0	4	30	70	3 Hours	100
	305.2	Open Source Technologies								
	305.3	Block Chain Technology								
6	306	Data Mining and Big Data LAB			6	3	30	70	3 Hours	100
7	307	Cryptography & Network Security LAB			6	3	30	70	3 Hours	100
8	308	Technical Report Writing		3		2	50	-		50
9		MOOCS	-			2	-	-	-	-
		Total	35			32	260	490		750
CIA – Continuous Internal Assessment						SEE – Semester End Examinations				

Master of Computer Applications (MCA)										
SEMESTER IV										
S.No	Course Code	Title of the Course	Instruction sHours per Week			Credits	Evaluation			Total Marks
			L	T	P		CIA Marks	SEE		
								Marks	Duration	
1	401	Project Work			4	16	---	150	3 Hours	150

**MBA Course Structure and Syllabus as per CBCS Guidelines with Effect from the
Academic year 2022-2023
SEMESTER –I**

Course Code	Course Title	Structure Code	Credits	HPW	Max. Marks CIA+SEE 30+70	Total
BUS1.1 (R22)	Management & Organizational Behavior	CC	3	4	30+70	100
BUS1.2 (R22)	Quantitative Techniques for Management	CC	3	4	30+70	100
BUS1.3 (R22)	Business Environment and Legislation	CC	3	4	30+70	100
BUS1.4 (R22)	Fundamentals of Accounting	CC	3	4	30+70	100
	COMPULSORY FOUNDATION					
BUS1.5 (R22)	Business Communication	CC	3	4	70	70
BUS 1.5.1(R22)	Life Skills & Soft Skills	SEC	2	2	30 IE	30
BUS1.6 (R22)	IT Applications for Management	CC	3	4	70	70
BUS1.6.1(R22)	MS Excel (Lab)	AEC	2	2	30 IE	30
	ELECTIVE FOUNDATION OPT-1					
BUS1.7.1(R22) BUS1.7.2(R22) BUS1.7.3(R22)	1.Managerial Economics 2.E- Business 3.Technology Management	GE	3	4	30+70	100
Total Credits			25	32	700	700

SEMESTER –II

Course Code	Course Title	Structure Code	Credits	HPW	Max. Marks CIA+SEE 30+70	Total
BUS 2.1 (R22)	Business Law	CC	3	4	30+70	100
BUS2.2 (R22)	Financial Management	CC	3	4	30+70	100
BUS2.3 (R22)	Marketing Management	CC	3	4	30+70	100
BUS2.4 (R22)	Production & Operations Management	CC	3	4	30+70	100
	COMPULSORY FOUNDATION					
BUS2.5(R22)	Human Resources Management	CC	3	4	70 SEE	70
BUS2.5.1R22)	Mentoring & Coaching Skills	SEC	2	2	30 IE	30
BUS2.6 (R22)	Research Methodology	CC	3	4	70SEE	70
BUS2.6.1(R22)	Minor Research Project using Statistical Packages	AEC	2	2	30 IE	30
	ELECTIVE FOUNDATION OPT-1					
BUS2.7.1(R22) BUS2.7.2(R22) BUS2.7.3(R22)	1. Entrepreneurship Development and Start Up Management 2.Business Intelligence 3.Cyber Security	GE	3	4	30+70	100
Total Credits			25	32	700	700

Summer Internship for 8 Weeks

SEMESTER –III

Course Code	Course Title	Structure Code	Credits	HPW	Max. Marks CIA+SEE 30+70	Total
BUS 3.1 (R22)	Business Policy & Strategic Management	CC	3	4	30+70	100
BUS 3.2 (R22)	Decision Support Systems & MIS	CC	3	4	30+70	100
BUS 3.3 (R22)	Business Ethics & Corporate Governance	GE	3	4	70 SEE	70
Bus 3.3.1 (R22)	Case Study Presentation of CSR/Ethical practices of 2 companies	AEC	2	2	30 IE	30
	ELECTIVE PAPERS Choose any Two Specializations					
BUS 3.4.M (R22)	MARKETING SPECILIZATION (Choose any Two Papers) 1.Advertising & Brand Management	DSE	3	4	30+70	100
BUS 3.5M (R22)	2. Customer Relationship Management		3	4	30+70	100
BUS 3.6M (R22)	3. Retail Management					
BUS 3.4F (R22)	FINANCE SPECILIZATION (Choose any Two Papers) 1.Security Analysis & Portfolio Management	DSE	3	4	30+70	100
BUS 3.5F (R22)	2.International Financial Management		3	4	30+70	100
BUS 3.6F (R22)	3. Basics of Taxation					
BUS 3.4HR (R22)	HRM SPECILIZATION (Choose any Two Papers) 1. Industrial Relations & Labor Laws	DSE	3	4	30+70	100
BUS 3.5HR (R22)	2.Management Training & HRD		3	4	30+70	100
BUS 3.6HR (R22)	3.Organizational Change & Organizational Development					
BUS 3.4 BA (R22)	BUSINESS ANALYTICS SPECILIZATION (Choose any Two Papers) 1.Introduction to Business Analytics Tools		3	4	30+70	100
BUS 3.5 BA (R22)	2.Data Visualization & Predictive Analysis		3	4	30+70	100
BUS 3.6 BA (R22)	3.Big Data Analytics					
	MOOCS					
	TOTAL		23	30	700	700

**Note: In III Semester the students shall opt any two specialization groups with 2+2 papers.
In IV Semester the student shall continue the same groups of specialization with 3 + 2 papers.**

SEMESTER –IV

Course Code	Course Title	Structure Code	Credits	HPW	Max. Marks CIA+SEE 30+70	Total
BUS 4.1 (R22)	Global Business	CC	3	4	30+70	100
BUS 4.2 (R22)	Knowledge Management	CC	3	4	30+70	100
BUS 4.3 (R22)	Business Analytics	GE	3	4	70 SEE	70
BUS 4.3.1 (R22)	Lab Data Analytics using Python	SEC	2	2	30 IE	30
	ELECTIVE PAPERS Choose any Two Specializations					
BUS 4.4M (R22)	MARKETING SPECILIZATION 1. Logistics & Supply Chain Management	DSE	3	4	30+70	100
BUS 4.5M (R22)	2. Rural & Agricultural Marketing		3	4	30+70	100
BUS 4.6M (R22)	3. Social Media& Digital Marketing					
BUS 4.4F (R22)	FINANCE SPECILIZATION 1. Financial Derivatives	DSE	3	4	30+70	100
BUS 4.5F (R22)	2. Management of Financial Services		3	4	30+70	100
BUS 4.6F (R22)	3. Corporate Taxation					
BUS 4.4HR (R22)	HRM SPECILIZATION 1. International Human Resource Management	DSE	3	4	30+70	100
BUS 4.5HR (R22)	2. Talent Management		3	4	30+70	100
BUS 4.6HR (R22)	3. Compensation Management					
BUS 4.4 BA (R22)	BUSINESS ANALYTICS SPECILIZATION 1. Enterprise Resource Planning		3	4	30+70	100
BUS 4.5 BA (R22)	2. Business Forecasting & Business Optimization		3	4	30+70	100
BUS 4.6 BA (R22)	3. Machine Learning & Data Mining					
	Internship/ Project	CC	4	2	50+50	100
	Project Viva-Voce	CC			100	100
	Total		27	32	900	900

**Note: In III Semester the students shall opt any two specialization groups with 2+2 papers.
In IV Semester the student shall continue the same groups of specialization with 3 + 2 papers.**

N.B. Project work/Internship and viva-voce marks will be shown in the IV semester only.

ANNEXURE - I CBCS CURRICULAR FRAMEWORK (2020 - 21 ONWARDS) - BACHELOR OF ARTS

Subjects		SEM I		SEM II		SEM III		SEM IV		SEM V		SEM VI			
		Hrs/W	Credits	Hrs/W	Credits	Hrs/W	Credits	Hrs/W	Credits	Hrs/W	Credits	Hrs/W	Credits		
Languages															
English		4	3	4	3	4	3								
Language (H/T/S)		4	3	4	3	4	3								
Life Skill Courses		2	2	2	2	2+2	2+2								
Skill Development Courses		2	2	2+2	2+2	2	2								
Core Papers															
Major 1	Core 1,2,3,& 4	5	4	5	4	5	4	5	4			THIRD PHASE of APPRENTICESHIP Entire 5th / 6th Semester		FIRST and SECOND PHASES (2 spells) of APPRENTICESHIP between 1st and 2nd year and between 2nd and 3rd year (two summer vacations).	
Major 2	Core 1,2,3,& 4	5	4	5	4	5	4	5	4						
Major 3	Core 1,2,3,& 4	5	4	5	4	5	4	5	4						
Major 1	Core -5							5	4						
Major 2	Core -5							5	4						
Major 1	Skill Enhancement Core Courses 6 & 7									5	4				
										5	4				
Major 2	Skill Enhancement Core Courses 6 & 7									5	4				
										5	4				
Major 2	Skill Enhancement Core Courses 6 & 7									5	4				
										5	4				
Hrs/W (Academic Credits)		27	22	29	24	29	24	30	24	30	24	0	12	4	4
Project Work															
Extension Activities (Non Academic Credits)															
NCC/NSS/Sports/Extra Curricular									2						
Yoga							1		1						
Extra Credits															
Hrs/W (Total Credits)		27	22	29	24	29	25	30	27	30	24	0	12	4	4

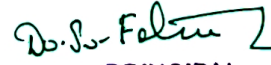
ANNEXURE - II CBCS CURRICULAR FRAMEWORK (2020 - 21 ONWARDS) - BACHELOR OF SCIENCES

Subjects		SEM I		SEM II		SEM III		SEM IV		SEM V		SEM VI			
		Hrs/W	Credits	Hrs/W	Credits	Hrs/W	Credits	Hrs/W	Credits	Hrs/W	Credits	Hrs/W	Credits		
Languages															
English		4	3	4	3	4	3								
Language (H/T/S)		4	3	4	3	4	3								
Life Skill Courses		2	2	2	2	2+2	2+2								
Skill Development Courses		2	2	2+2	2+2	2	2								
Major 1	Core 1,2,3,& 4	4+2	4 + 1	4+2	4 + 1	4+2	4 + 1	4+2	4 + 1			THIRD PHASE of APPRENTICESHIP Entire 5th / 6th Semester	FIRST and SECOND PHASES (2 spells) of APPRENTICESHIP between 1st and 2nd year and between 2nd and 3rd year (two summer vacations).		
Major 2	Core 1,2,3,& 4	4+2	4 + 1	4+2	4 + 1	4+2	4 + 1	4+2	4 + 1						
Major 3	Core 1,2,3,& 4	4+2	4 + 1	4+2	4 + 1	4+2	4 + 1	4+2	4 + 1						
Major 1	Core -5							4+2	4 + 1						
Major 2	Core -5							4+2	4 + 1						
Major 3	Core -5							4+2	4 + 1						
Major 1	Skill Enhancement Courses (6 & 7)									4+2	4 + 1				
										4+2	4 + 1				
Major 2	Skill Enhancement Courses (6 & 7)									4+2	4 + 1				
										4+2	4 + 1				
Major 3	Skill Enhancement Courses (6 & 7)									4+2	4 + 1				
										4+2	4 + 1				
Hrs/W (Academic Credits)		30	25	32	27	32	27	36	30	36	30		12	4	4
Project Work															
Extension Activities (Non															
NCC/NSS/Sports/Extra Curricular									2						
Yoga							1		1						
Extra Credits															
Hrs/W (Total Credits)		30	25	32	27	32	28	36	33	36	30		12	4	4

ANNEXURE - III CBCS CURRICULAR FRAMEWORK (2020 - 21 ONWARDS) - B.Com., BBA, BCA etc.

Subjects		SEM I		SEM II		SEM III		SEM IV		SEM V		SEM VI			
		Hrs/W	Credits	Hrs/W	Credits	Hrs/W	Credits	Hrs/W	Credits	Hrs/W	Credits	Hrs/W	Credits		
Languages															
English		4	3	4	3	4	3								
Language (H/T/S)		4	3	4	3	4	3								
Life Skill Courses		2	2	2	2	2+2	2+2								
Skill Development Courses		2	2	2+2	2+2	2	2								
Core Courses***															
Core		5	4	5	4	5	4	5	4			THIRD PHASE of APPRENTICESHIP Entire 5th / 6th Semester		FIRST and SECOND PHASES (2 spells) of APPRENTICESHIP between 1st and 2nd year and between 2nd and 3rd year (two summer vacations).	
Core		5	4	5	4	5	4	5	4						
Core		5	4	5	4	5	4	5	4						
Core								5	4						
Core								5	4						
Core								5	4						
(Domain Related) Skill Enhancement Courses**** (SECs)										5	4				
										5	4				
										5	4				
										5	4				
										5	4				
Hrs/W (Academic Credits)		27	22	29	24	29	24	30	24	30	24	0	12	4	4
Project Work															
Extension Activities															
NCC/NSS/Sports/Extra Curricular									2						
Yoga							1		1						
Extra Credits															
Hrs/W (Total Credits)		27	22	29	24	29	25	30	27	30	24	0	12	4	4




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