ಬೆಂಗಳೂರು
ನಗರ ವಿಶ್ವವಿದ್ಯಾನಿಲಯ

**BENGALURU
CITY UNIVERSITY**

Office of the Registrar, Central College Campus, Dr. B.R. Ambedkar Veedhi, Bengaluru – 560 001.
PhNo.080-22131385, E-mail: registrarbcu@gmail.com

No.BCU/Syn/BoS/OE-UG356/2022-23   Date:17.12.2022.

NOTIFICATION

Sub: Open Elective Papers prescribed for III Semester Under Graduate Courses of Bengaluru City University (BCU) as per NEP-2020 applicable from the Academic Year – 2022-23

Ref: 1. Proceedings of the Board of Studies of different UG Subjects
         2.Proceedings of the Academic Council meeting held on 29.10.2022
         3. Vice-Chancellor's approval date: 17.12.2022.

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In continuation of this office notification cited above and by the direction of the Vice-Chancellor, the revised list of Open Electives, SEC & AECC Subjects of III & IV Semester U.G Course duly including the OE Subjects recommended by Board of Studies in Education, Physical Education and Sericulture and SEC Subjects recommended for BCA & B.Voc (IT) courses are notified as under:

Sl. No	Course / Subject	Open Elective for III Semester
FACULTY OF ARTS		
1.	Kannada	ಕನ್ನಡದ ಆತ್ಮಚರಿತ್ರೆಗಳು
2.	English	Creative Writing in English Drama
3.	Hindi	Sahityettar Vidwanon Ki Jeevani
4.	Sanskrit	Kshema Kutuhalam
5.	Tamil & Malayalam	**Tamil** Introductory Tamil -3
		Malayalam Introductory Malayalam-3
6.	Telugu	Introductory Telugu -III
7.	Urdu	Urdu Shairi
8.	Foreign Languages	**French** Basic French
		Spanish Basic Spanish
9.	Economics	**BA Economics & B.Sc Economics** 1.Rural Economics 2.Economics of Human Development
10.	History	1.Introduction to Epigraphy 2. Freedom Movement in Karnataka
11.	Mass Communication & Journalism	Feature Writing and Freelancing (Practical)
12.	Social Work	Disaster Management
13.	Visual Arts	**BVA-Design** Handicraft (Practical) **BVA in Painting** Visual Art-Painting 3 (Practical)
14.	Political Science	1. Gender and Politics 2. Understanding Gandhi

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15.	Sociology	1.Sociology of Tourism and Management 2.Sociology of Youth
16.	Women Studies	1. Gender and Disability 2. Gender Culture and Mass Media
17.	Criminology and Forensic Science	1. Gender and Crime 2. Crime Scene Investigation
18.	Performing Arts	**Dance-(Bharathanatyam / Kathak / Kuchupudi)** Nritya Gnana
		B.A/ B.P.A -Theatre Arts (Drama) Folklore & Performance Studies
		Music Karnataka Classical Music
FACULTY OF EDUCATION & PHYSICAL EDUCATION		
19.	Education	Life Skills in Education
20.	Physical Education	**1.** Health and Safety Education 2. Adventure Sports
FACULTY OF COMMERCE & MANAGEMENT		
21.	B.Com	1. Advertising Skills 2. Entrepreneurship Skills
22.	B.Com (A& F)	
23.	B.Com (Business Data Analytics)	
24.	B.Com (Tourism & Travel)	
25.	B.Com (LSCM)	
26.	B.A. Marketing	Business Environment
27.	BBA	1.Social Media Marketing 2. Business Correspondence
28.	B.Voc (Retail Management)	Social Media Marketing
29.	B.Voc (Accounting & Taxation)	Personal Finance and Planning
30.	BBA (Aviation)	1. Airport operations 2. Aviation Safety & Security
31.	BHM	1. Managing Hospitality & Tourism Products 2. Sustainable Travel and Hospitality
FACULTY OF SCIENCE		
32.	Bio-Chemistry	Biochemical Techniques
33.	Botany	Landscaping and Gardening
34.	Chemistry	Atomic Structure, Bonding and Concepts in Organic Chemistry
35.	Electronics	1. Application of Electronics-1 2. Microprocessor
36.	Physics	1. Optical Instruments 2. Elements of Astronomy and Astrophysics
37.	Apparel Technology	**Fashion & Apparel Design** Fashion Make Over
		Interior Design & Decoration Arts and Craft for Interiors
38.	Geography	1. Geography of India 2. Geography of Tourism
39.	Mathematics	1. Quantitative Mathematics 2. Vedic Mathematics
40.	Microbiology	Microbial Entrepreneurship
41.	Biotechnology	Nutrition & Health

42.	Statistics	1. Population Studies 2. Survival Models
43.	Zoology	Endocrinology
44.	Genetics	Eugenics, Euphenics and Society
45.	Computer Science & Applications (B.Sc & BCA)	Fundamentals of HTML & CSS
46.	(a) Home Science	Fundamentals of Interior Decoration
	(b) Nutrition & Dietetics	Nutrition Assessment / Traditional Foods and Health
	(c) Clinical Nutrition & Dietetics	Traditional Foods and Health
47.	Psychology	Psychology and Mental Health
48.	Sericulture	Silkworm Rearing Technology

With regard to offering of Open Electives for III Semester students it is clarified that:

a) Science Students are required to study open electives from the Arts or Commerce & Management or other Streams not from the Science Streams.

b) Arts Students are required to study open electives from the Science or Commerce and Management or other Streams not from Arts Streams.

c) Commerce and Management students are required to study open elective from Science or Arts or other Streams not from Commerce and Management Streams.

As per 4 year Under Graduate Programme, students are required to study only 9 credit courses from other streams. Hence, there will not be 4th Open Elective paper in the second year.

Since, I Semester classes have already begun and the Syllabus is being taught, there will not be any change in the course structure and selection of Open Electives and SEC and AECC Papers for the current Academic Year 2022-23 for the I & II Semester Courses. The Syllabus & Course Structure of the year 2021-22 will continue for 2022-23 also. However the students have to opt open elective from other faculty subjects from 2023-24.

The distribution of AECC and SEC and Open Elective -3 subjects for III & IV Semesters would be as follows.

Courses	III Semester	IV Semester
B.A / BSW/ BCA/ BVA / B.Sc./B.Sc. (FAD), B.Sc. (Rehabilitation) / B.Voc (Information Technology)	Open Elective III	Constitution of India (AECC)*
B.Com/ BBA/BHM/ B.Voc i) Retail Management ii) Accounting Taxation	Constitution of India (AECC)*	Open Elective III
B.A / BSW/BVA / B.Sc./B.Sc. (FAD), B.Sc. (Rehabilitation) BCA B.Voc (Information Technology)	Artificial Intelligence (SEC) Computer Assembly and Repair (SEC) Unix Programming (SEC)	Financial Education & Investment Awareness (SEC)
B.Com/ BBA/BHM/ B.Voc i) Retail Management ii) Accounting Taxation	Financial Education & Investment Awareness (SEC)	Artificial Intelligence (SEC)

*The Syllabus of AECC-Constitution of India notified along with the Political Science Syllabus of III Semester, Artificial Intelligence, Financial Education & Investment Awareness, Computer Assembly & Repair and Unix Programming are enclosed for reference and implementation.

The Principals of the Affiliated Colleges are required to make necessary arrangements for teaching.

The contents of the above notifications may be brought to the notice of the Teachers and Students Concerned.

REGISTRAR (I/C)

To,
All the Principals of the Constituent and Affiliated Colleges

Copy to:
1. The Additional Chief Secretary, Higher Education Dept., M.S Building, Bengaluru
2. The Executive Director, KSHEC, P.K Block, BCU
3. All the Deans of the Faculties, BCU
4. All the Chairpersons of UG Board of Studies, BCU
5. All the Chairpersons of PG Departments, BCU
6. The Registrar (Evaluation), BCU
7. The Finance Officers, BCU
8. PS to Vice-Chancellor/ Registrar/Registrar(Evaluation)
9. University Website publication

CONSTITUTION OF INDIA

Ability Enhancement Compulsory Courses(AECC) III Sem B.Com/BBA and IV Sem BA/B.SC/BCA/BHM/BSW and other Courses	
Course Title: CONSTITUTION OF INDIA	
Total Contact Hours:24	Course Credits:2
No. of Teaching Hours/Week:2	Duration of ESA/Exam:1 **Hours**
Formative Assessment Marks:20	Summative Assessment Marks:30+20=50

Course Objective:

The purpose of the course is to familiarize the students with the key elements of Indian constitution. The course has been designed to cover the journey of the India from its emergence as a Republic. This will enable the students to understand various political Institutions that are operationalised under the Indian Constitution.

Learning Outcomes:
After completing this course students will be able to-

- Understand the philosophy of the Constitution and its structure.
- Measure the powers and functions of various offices under the Constitution.
- Appreciate the role of Constitution in a Democracy

Unit	Contents of Course:	24Hours
Unit-I	**Chapter- 1 Making of Indian Constitution** : Constituent Assembly-Composition, Objectives, Preamble and Salient features of the Indian Constitution. **Chapter-2** Fundamental Rights, Fundamental Duties, Directive Principles.	**8Hours**
Unit-II	**Chapter-3 Union Government**-President, Prime Minister and Council of Ministers **Chapter-4 State Government**-Governor, Chief Minister and Council of Ministers	**8Hours**

| Unit- III | **Chapter- 5 Judiciary**-Supreme Court and High Court: Composition, Powers and Functions and Judicial Review. | **8Hours** |
| | **Chapter-6 Electoral Process**: Election Commission-Composition, Powers and Functions, Electoral Reforms. | |

Exercise:

- Department can debate on the role of Constitution in the country's development.
- Students can empirically evidence the effectiveness of concepts like–Freedom, Equality, Justice, Rights and Duties by conducting surveys.
- Can hold special lectures on various provisions of Constitution like working of Election Commission, Art 246, 356etc.

Kindly Note:

- The Ability enhancement compulsory courses (AECC) paper – "'Constitution of India'' (a) should be taught only by the Political Science/Law teachers. (b) This paper should be offered in IIIrd semester for B.Com/BBA courses. In the IVth Semester, this paper should be offered to BA/BSc/BFA/BCA/BHM/BSW and other all UG courses.

Suggested Readings:

1. DurgaDasBasu,IntroductiontotheConstitutionofIndia,Gurgaon;LexisNexis,(23rdedn.) 2018.
2. M.V.Pylee,India'sConstitution,NewDelhi;S.ChandPub.,(16thedn.) 2017.

3. J.N.Pandey,TheConstitutionalLawofIndia,Allahabad;CentralLawAgency,(55thedn.) 2018.
4. Constitution of India (Full Text), India.gov.in., National Portal of India, https://www.india.gov.in/sites/upload_files/npi/files/coi_part_full.pdf
5. KBMerunandan,BharatadaSamvidhanaOnduParichaya,Bangalore,MeraguPublications, 2015.
6. ಪ್ರೋ.ಎಚ್.ಎಂ.ರಾಜಶೇಖರಭಾರತಸರ್ಕಾರಮತ್ತುರಾಜಕೀಯ,ಕಿರಣಪ್ರಕಾಶನ,ಮೈಸೂರು2020.
7. K. Sharma, IntroductiontotheConstitutionofIndia,PrenticeHallofIndia,NewDelhi,2002.

8. P.MBakshi, ConstitutionofIndia,UniversalLawPublishingHouse, NewDelhi,1999.

9. D.C.Gupta,IndianGovernmentandPolitics,VikaspublishingHouse, NewDelhi, 1975.

10.S.N.Jha,IndianPoliticalSystem,:HistoricalDevelopments,GangaKaveriPublishingHouse, Varanasi,2005.
11.Arora&Mukherji,FederalisminIndia,OriginandDevelopments,VikasPublishingHouse,New Delhi,1992.

Pedagogy:

The course shall be taught through the Lecture, Tutorial, Interactive Sessions, Self-guided Learning Materials, Open Educational Recourses (OER) as reference materials, Practical Exercises, Assignments, Seminars, Group Discussions Field Visit and Week-end Counseling Classes.

Formative Assessment	
Assessment Occasion/type	**Weightage in Marks**
AssessmentTest-1	5
Seminar/Group Discussion/Field Visit	5
AssessmentTest-2	5
Assignment	5
Total	**20**

Sd/-
Chairperson, BOS

Skill Enhancement Course: SEC for B.Sc. & other Subject Students

Semester: III/IV

Course Title: **Artificial Intelligence**	Course Credits: 2
Total Contact Hours: 13 hours of theory and 26 hours of practical	Duration of ESA: 01 Hour
Formative Assessment Marks: 20 marks	Summative Assessment Marks: 30 marks

Course Outcomes (COs):

At the end of the course, students will be able to:
- Appraise the theory of Artificial intelligence and list the significance of AI.
- Discuss the various components that are involved in solving an AI problem.
- Illustrate the working of AI Algorithms in the given contrast.
- Analyze the various knowledge representation schemes, Reasoning and Learning techniques of AI.
- Apply the AI concepts to build an expert system to solve the real-world problems.

Course Content (Artificial Intelligence)

	Details of topic	Duration
Course – 1 - Azure AI Fundamentals (AI-900)	AI-900 pathway consists of 5 courses and 2 reading material: i. Introduction to AI on Azure ii. Use visual tools to create machine learning models with Azure Machine Learning iii. Explore computer vision in Microsoft Azure iv. Explore natural language processing v. Explore conversational AI vi. Tune Model Hyperparameters - Azure Machine Learning (Reading) vii. Neural Network Regression: Module Reference - Azure Machine Learning (Reading	05 hours
Practical	1. Prepare the data 2. Model the data 3. Visualize the data 4. Analyse the data 5. Deploy and maintain deliverables	13 hours

Course – 2 - Data Analyst Associate (DA-100)	DA-100 pathway consists of 5 courses and 2 reading material: 1. Get started with Microsoft data analytics 2. Prepare data for analysis 3. Model data in Power BI 4. Visualize data in Power BI 5. Data analysis in Power BI 6. Manage workspaces and datasets in Power BI 7. Key Influencers Visualizations Tutorial - Power BI 8. Smart Narratives Tutorial - Power BI	Microsoft Docs	08 hours
Practical	1. Describe Artificial Intelligence workloads and considerations 2. Describe fundamental principles of machine learning on Azure 3. Describe features of computer vision workloads on Azure 4. Describe features of Natural Language Processing (NLP) workloads on Azure	13 hours

References to learning resources:
1. The learning resources made available for the course titled "Azure AI Fundamentals (AI-900) and Data Analyst Associate (DA-100)." on Future Skills Prime Platform of NASSCOM.

Pedagogy
Flipped classroom pedagogy is recommended for the delivery of this course.
For every class:
1. All the faculty who takes this class should go for a Faculty Development Program on these before starting the session.
2. Faculty needs to introduce this course to the students then students need to start learning from Future Skills PRIME platform.
3. Faculty also needs to explain the course outcomes and needs of the course and why it is needed for the students.
4. Then students need to start learning online after registering on the platform.
5. Classroom activities are designed around the topic of the session towards developing better understanding, clearing doubts and discussions of high order thinking skills like application, analysis, evaluation, and design.
6. Every theory class ends with announcement of exercise for practical activity of the week.

Exercises:

Practical Exercises	Weightage in marks
After each chapter students' needs to complete exercises based on the learning in Azure environment.	No Weightage (But students need to complete it to move to next chapter) .

Assessment:

Formative Assessment	
Assessment Occasion	**Weightage in Marks**
1. Summative Assessment: After completion of both the courses, the student can optionally give Assessment for each of the courses on Future Skills Prime platform. Students will have two attempts and those who score at least 50% marks per course will get certificate from NASSCOM-MeitY.	This assessment may be given 50% weight in computing the final grade of the students.

Course Title: **Financial Education and Investment Awareness**	Course Credits: 2
Total Contact Hours: **30 Hours of Theory and 15 Hours of Practical Sessions**	Duration of ESA: **90 Minutes**
Formative Assessment Marks: **20**	Summative Assessment Marks: **30**
Model Syllabus Authors: **NSE Academy and Karnataka State Higher Education Council (through Model Curriculum Committee for Commerce and Management)**	

Module 1: Foundations for Finance   10 hours

Introduction to Basic Concepts of Finance: Money and its need, Meaning and need for Financial Planning; Life goals and financial goals of an individual; Format of a sample financial plan for a young adult.

Time value of Money: Meaning, need, Concepts of Compounding – Simple and compound interest and Discounting- Present value of single cash inflow, series of cash inflow, annuity, perpetuity- *problems*.

Valuation Of Securities: Meaning, need for valuation of securities, Valuation of fixed income securities-debentures and preference shares, valuation of equity shares, dividend capitalization approach, earnings capitalization approach-*problems*.

Module 2: Investment Avenues   15 hours

Introduction to Investment: Meaning, Need, Essentials of investment, Investment and speculation, Basic investment objectives, Diversification- Need for diversification,

Investment Avenues for a Common Investor: Bank deposits; Corporate Securities-Equity shares, Preference shares, debentures, bonds, company deposits; Post Office savings schemes, Government securities, Real Estate, Gold and Bullion, Chit and Nidhi Companies, Life Insurance, Retirement and Pension Plans - National Pension System, Atal Pension Yojana etc. (Features if all Investment Avenues with Income Tax benefits); Risk and return relationship (*Theory only*).

Stock Markets: Primary Market and Secondary Market, StockExchanges, Stock Exchange Operations – Trading and Settlement, DEMAT Account, Depository and Depository Participants; Investor Protection.

Module 3: Mutual Funds   5 Hours

Mutual Funds: Meaning and Features of Mutual Funds, History of Mutual Funds in India, Benefits, and

drawbacks of investment in mutual fund; Major Fund Houses in India and Types of Mutual Fund Schemes and plans; SIP, STP, SWP of mutual fund; Net Asset Value- *simple problems*.

Practical Lab Hours: 15 hours

Module 1: Foundations for Finance   **Lab exercises 5 Hours**

- **Spreadsheet Modelling:**
  - IF Function
  - SUM Function
  - AVERAGE Function
  - INDEX, MATCH and VLOOKUP Function
  - RANK Function
  - SUM PRODUCT Function
  - MAX & MIN Function
  - PRESENT VALUE Functions
  - FUTURE VALUE Functions
  - ANNUITY Functions
  - PERPETUITY Functions
  - Statistical Functions in Excel- through data analysis

- **Preparation of Financial Plan**

Module 2: Investment Avenues   **Lab exercises 5 Hours**
- Group Presentations on Investment Avenues- (Advantages, Suitability and Limitations)
- Demonstration of Stock Trading
- Demonstration of Technical Analysis and Exercises (NSE –TAME)
- Spreadsheet Modelling for calculating Stock Returns and risk.

Module 3: Mutual Funds   **Lab exercises 5 Hours**

- Identification of Fund Houses in India, Schemes and Plansof each Mutual Fund House (www.amfiindia.in , www.valueresearchonline.com)
- Exercises on Calculation of Net Asset Value
- Demonstration of Mutual Fund Fact Sheet

Question Paper Pattern

1. Internal Assessment – 20 marks (practical lab-based assignments with Lab records)
2. End Semester Exam – 30 marks

<u>Originally given by HEC and NSE</u>
Section A: 4 out of 5 questions (2 marks each) 4 X 2 = **8 Marks**
Section B: 2 out of 3 questions (6 marks each) 2 X 6 = **12 Marks**
Section C: (Compulsory): Analysis of One Case (or) Two Case-lets 1 X 10 = **10 Marks**

Modified pattern by BCU- BOS

Section A: 4 out of 5 questions (2 marks each) 4 X 2 = **8 Marks**
Section B: 2 out of 3 questions (6 marks each) 2 X 6 = **12 Marks**
Section C: (Compulsory): Descriptive question or problem 1 X 10 = **10 Marks**

References:

1. RBI Financial Education Handbook
2. NSE Knowledge Hub, AI-powered Learning Experience Platform for BFSI
3. NSE Academy Certification in Financial Markets (NCFM) Modules:
   a. Macroeconomics for Financial Markets
   b. Financial Markets (Beginners Module)
   c. Mutual Funds (Beginners Module)
   d. Technical Analysis

Reference Books:

S. No	Author/s	Title of the Book	Publisher
1	Prasanna Chandra	Financial Management	McGraw Hill Education
2	Aswath Damodaran	Corporate Finance	John Wiley & Sons Inc
3	Pitabas Mohanty	Spreadsheet Skills for Finance Professionals	Taxmann Publications
4	Fischer & Jordan	Security Analysis & Portfolio Management	Prentice Hall

Websites:

1. www.sebi.gov.in
2. www.nseindia.com
3. www.amfiindia.com

SEC II: COMPUTER ASSEMBLY

1. Demonstration of Hardware peripherals: CPU, RAM, SMPS, Motherboard, NIC card, Processor, Processor cooling fan, PCI card, HDD.

2. Demonstration of various ports: CPU , VGA port, PS/2 (keyboard, mouse) ,USB, LAN, Speaker, Audio.

3. Identify the Computer Name and Hardware Specification (RAM capacity, Processor type, HDD, 32 bit/ 64 bit)

4. Identify and Troubleshoot the problems of RAM (beep sound with blue screen), SMPS and motherboard (CPU is not switched ON)

5. Configure BIOS settings- disable and enable USB and LAN.

6. Identify, how to recover the hidden files from corrupted pendrive using command.

7. Recover the contents from crashed Hard Disk using Disk Drill software.

8. Install Operating System – Windows family (Windows 7/ Windows 10) and also make partitions.

9. Install Operating System - Unix family (Linux/UBUNTU)

10. Install Application software – python 3.8, MS- Office 2010/2013, MySQL, TOAD, Openoffice, etc.,

11. Install any one of the antivirus software (Avast, Kaspersky, etc.,) and observe the variations before and after installation.

12. Add new Hardware device (keyboard, mouse, Speaker, Microphone)

13. Connect the LCD Projector with Laptop / CPU.

14. Adding additional RAM to the system.(expanding RAM size).

15. Graphic Card insertion.

16. Assemble and Disassemble Desktop System.

References:

1. Dan Gookin ,Troubleshooting & Maintaining Your PC ALL-IN-ONE, 3rd Edition,2017, John Wiley & Sons.

2. Mike Meyers, Scott Jernigan, Dan Lachance, "CompTIA Fundamentals + Exam Guide (All-in-One), 2nd Edition, 2019, Mc Graw Hill Education.

Web References:

1. https://www.youtube.com/watch?
   v=ItxwyMR0SnY&list=PLeH4ngtDM7eE-1_mdWuXWyZrI_FMHnyJ0&index=5

2. https://www.cleverfiles.com/howto/crashed-hard-drive-recovery.html

SEC II: UNIX PROGRAMMING

1. Write Shell programs to count the number of characters in a given string.
2. Write Shell programs to find whether the given year is leap year or not.
3. Write Shell programs to check whether a given number is even or odd.
4. Write Shell programs to find the factorial of a given number.
5. Write Shell programs to print a string in the reverse order.
6. Write Shell programs to count the number of vowels in a given string.
7. Write Shell programs to print all prime numbers between m and n (m<n).
8. Write Shell programs to check whether a given string is a palindrome or not.
9. Write Shell programs to display all the files in the current directory.
10. To write a shell script that creates a file and compresses it.
11. Create a file containing the following fields : StudentNo, Student Name, age, sex, height and weight. Print all the details in a neat format.
12. Write Shell program to search a particular pattern using grep command.
13. Write Shell program to check for file existence.
14. Write menu based shell programs with at least 3 options for the following payroll system.
15. Write Shell program to demonstration of rm-r, uniq, tail, cmp.

Text Books:
1. Forouzan: Unix and Shell Programming, 1st Edition, Cengage Learning India, 2003.
2. Raymond, The Art of Unix Programming, Pearson Education, Asia, 2003.
3. Kernighan B.W. & Robert B, The Unix programming environment, 1984.
4. UNIX and Shell Programming, Archana Verma, Firewall Media, 2006.

Reference books:
1. Sobell G, A practical Guide to Unix System, 3/e, 1995.
2. Kochan & Wood, Unix Shell Programming, Pearson Education, 3/e, 2003.
3. Sumitabha Das – UNIX: Concepts and Applications 4/e, 2006.