ANNEXURE -I
PROGRAM COMMITTEE AND OUTCOME

Introduction of New Programmes at
Parvathaneni Brahmayya Siddhartha College of Arts and Science

Enhancing Academic Excellence through Participative Leadership

The Governance of the Parvathaneni BrahmayyaSiddhartha College of Arts and Science is a reflection of successful leadership in tune with the vision and mission of the institution as it includes all the stakeholders. The institution strongly believes in transparency, quality, participative leadership and delegation of power at various levels.

The Program Committee is one among the important committees' of PB Siddhartha College and it believes the culture of participative management in all academic and non-academic activities.

A Program Committee which is well-structured and comprises of Head of departments and experts in domain specific knowledge. The Committee is constantly involved in overseeing, mentoring and proposing the programs.

The major responsibility of the Program Committee is to provide an oversight on each new program to be introduced and the pros and cons of the execution of the programmes in the form of a report. Then the report is placed in the governing body and approved for implementation. Later on, formal approval for introducing the programme will be obtained from concerned authorities like Krishna University, AICTE etc.

The Program Committee is committed in bringing latest employability programmes to cater to the needs of local and regional public. Generally these programmes are introduced first time in this region and also at very low fee structure compared to many professional institutes. Students are provided with diverse learning opportunities that foster critical thinking, creativity, and innovation at their door steps. Over the past five years, the committee has successfully introduced ten new courses designed to enhance our curriculum.

Sl. No.	Programme	Introduced in Academic Year
1	**B.Sc. CAME (Computer Applications, Mathematics and Electronics)**	2018-19
2	**B.Sc., MSDS (Mathematics, Statistics and Data Science)**	2019-20
3	**B.Sc., Computer Science with Cognitive Systems**	2020-21
4	**B.Com.,BPM(Business Process Management)**	2020-21

5	**B.Com., BSFI (Banking services, Finance, Insurance)**	2021-22
6	**B.Sc., AI and ML**	2021-22
7	**M.Sc.,Computational Data Science**	2021-22
8	**BBA Retail Management**	2022-23
9	**B.Sc., Data Analytics**	2023-24
10	**MBA Business Analytics**.	2023-24
11	**B.Sc., Bio technology,**	2024-25

These courses offer cutting-edge knowledge and skills essential for students to thrive in today's dynamic and competitive world. These programmes are well received by the community and the college is getting 100% admissions from the beginning of each programme. The students are well received by the industry after their graduation.

The details of the programme are given below.

1. **BSc MSDS (Mathematics, Statistics and Data Science)**

The world today heavily relies on data. From businesses to governments, organizations use data to make informed decisions. MSDS graduates are equipped with the necessary skills to collect, analyze, interpret, and extract valuable insights from this data.The demand for data scientists and analysts is skyrocketing across various industries. MSDS graduates can find employment in fields like:

- Data Science
- Data Analytics
- Machine Learning
- Artificial Intelligence
- Business Intelligence
- Financial Analysis
- Research and Development
- Software Engineering
- Healthcare
- Marketing
- And many more...

MSDS programs provide a solid foundation in mathematical and statistical concepts, which are essential for data analysis and modeling. This knowledge enables graduates to understand the underlying principles of data-driven techniques.

The BSc MSDS degree provides a viable avenue for people seeking to utilize data to foster innovation and address real-world challenges. It offers a robust foundation in mathematics, statistics, programming, and data analysis, preparing graduates with the requisite skills and knowledge to thrive in the data-driven age.

2. B.Sc. Computer Science with Cognitive Systems (In Collaboration with TCS-Industry Integrated)

The Bachelor of Science in Computer Science with Cognitive Systems is an innovative undergraduate program that blends traditional computer science education with specialized knowledge in cognitive systems. Offered in collaboration with Tata Consultancy Services (TCS), this industry-integrated program prepares students for a career at the intersection of technology and artificial intelligence.

Cognitive systems are extremely important in developing modern technology like artificial intelligence and machine learning. Here are some of the topics that are covered under this programme:Programming ,Operating systems, Psychology, Introduction to information technology, Computer networks, Database management, IT infrastructure, Artificial intelligence, Neural learning.

Additionally, the Computer Science with Cognitive Systems students are given enough practical laboratory experience to be well acquainted with the applications of such programmes in the real world for solving real-world problems.Computer Science with Cognitive Systems is a fast-growing field because these days, all the devices like artificial intelligence and virtual reality have become extremely popular. In all the voice assistants of different software's, it is the cognitive systems that are being developed.

It is industry inaugurated programe, so that the curriculum is aligned with industry standards and practicesand opportunities for internships, projects, and mentorship with TCS professionals provide practical exposure.Computer Science with Cognitive Systems is not just a subject in itself. It is a rapidly emerging field that enables a person to work in the areas of virtual reality and mixed reality, like the met averse, robotics, artificial intelligence, the internet of things, cyber security, data mining, and automation.

As a person with a bachelor's degree in Computer Science with cognitive systems, you can get any of the following jobs:VR developer ,Robotics engineer, Data mining specialist, Cognitive programmer, Operational efficiency manage

This program aims to create well-rounded professionals who are ready to tackle the challenges of the digital age with innovative solutions.

3. B.Com.-Business Process Management (In Collaboration with TCS-Industry Integrated) :

B.Com-Business Process Management is a 3-year programme that has been designed taking into account mercurial business world and prepare students for careers in managing and optimizing business processes within various industries.

This special programme is designed in collaboration with Tata Consultancy Services (TCS) facilitates students to conveniently pursue careers in the IT Industry, as well as in sectors like Banking, Insurance, Financial Services and Retail etc. The programme enables students to have a strong fundamental base in Economics, Taxation, Statistics, Auditing, Cost Accounting, Finance and other subjects. B. Com (Business process services) Program is more application oriented and gives practical exposure to the students along with the classroom theoretical knowledge of business & industry. The program methodology differs significantly from the traditional method. This program blends Industry Exposure with Academic Knowledge and is intended to prepare ready to be employed Business Graduates. This has encouraged good relationship between TCS and Academia.

TCS is one of the pioneer's IT Company which has been supporting the academic community across the globe since its origination. Academic Interface program has been initialized with various processes, matrices and structures. Due to the widening gap between educational institutions and the needs of the Industry, more specifically in the case of Business education, there is a need to ensure that education reflects changing work tasks and employment structures.

The program combines a solid foundation in business principles with specialized knowledge in business process management, providing students with the skills needed to improve organizational efficiency and effectiveness. The exclusive feature of this programme is the integration of subjects specially prepared by industry experts to incorporate the implementation of analytical and decision making skills.

The Bachelor of Commerce in Business Process Management is an undergraduate degree program designed to provide students with a thorough understanding of business fundamentals and specialized knowledge in process management, to equip students with analytical and problem-solving skills necessary for improving business processes and to prepare graduates for leadership roles in various industries, focusing on process optimization and operational efficiency.

Graduates in business process management with a B.Com. can work in a variety of positions, includingBusiness Process Analyst, Operations Manager, Quality Assurance Specialist, Project Manager, Business Consultant, Data Analyst ,andSupply Chain Manager.

The program includes a mix of lectures, case studies, practical exercises, and internships, allowing students to apply their knowledge in real-world settings. Collaborative projects and interactions with industry professionals provide additional insights into current business challenges and opportunities for process improvement.

4. B.Com BFSI (Banking, Financial Services and Insurance)

The B.Com BFSI (Banking, Financial Services and Insurance) is a Degree program designed to meet the needs of the society and the career opportunities of the students. This program (BFSI) with the specialization in Banking, Financial Services and Insurance overcomes the traditional B.Com Program limitations. This program focuses on Skill Development based multiple entry and exit bachelor's degree program to provide judicious mix of skills relating to a profession and appropriate content to general education so that they are industry ready at the end of the program.

This program is designed to provide students with a comprehensive understanding of banking, financial services, and insurance sectors. The curriculum covers subjects such as banking law, insurance law, accounting, risk management, financial management, and more. Students who pursue this course can expect to gain knowledge and skills relevant to careers in banks, financial institutions, insurance companies, consultancies, and other related fields.

The B.Com BFSI program aims to equip students with the necessary theoretical knowledge and practical skills required to excel in the dynamic world of banking and finance. Graduates of this program can explore various career opportunities in areas such as retail banking, corporate banking, wealth management, insurance services, and more. The course structure typically includes a mix of core subjects related to banking and finance along with elective courses that allow students to specialize in specific areas of interest within the BFSI sector.

Upon completion of the B.Com BFSI program, graduates have the option to pursue higher education such as Master's degrees (M.Com or MBA) or enter the workforce directly. Career opportunities for B.Com BFSI graduates include roles in banking institutions, financial consulting firms, insurance companies, investment firms, government agencies, and more.

The curriculum in each semester will be a suitable mix of general education and skill education components to industry specific skills to the students in Banking, Financial Services and Insurance Sectors. In India Financial Services and Insurance are in pace providing job opportunities. Both these sectors have great potential to emerge as leading branches in the near future. The demand for skilled professionals is ever increasing.

Revolution in digital technology facilitated the recent surge in online payments, mobile banking, Internet banking, changed the modern banking industry. To meet this challenge this program also provides IT skills and Computer Applications as a part of the curriculum.

5. B.Sc. Artificial Intelligence & Machine Learning (AI & ML)

Artificial Intelligence (AI) as a term has been there since 1955. Analysts have predicted AI to become a $46 billion market by 2020. Artificial Intelligence and Machine Learning Programme prepare students with the skills to perform intelligent data analysis which is a key component in numerous real-world applications.

The program is designed to educate the students to build intelligent machines, software, or applications with a cutting-edge combination of machine learning, analytics and visualization technologies. Students will learn how to develop AI and ML-based applications and algorithms, as well as how to analyze and interpret data using statistical and machine learning techniques. In addition to the theoretical knowledge, the program also provides hands-on training through projects and internships.

Students will work on real-world problems and develop practical skills that are highly valued by employers. Upon completing the program, students will have a strong foundation in computer science, as well as specialized skills in AI and ML. Graduates of this program can pursue careers as AI and ML engineers, data analysts, software developers, research scientists, and other related roles in the technology industry

This courseware is going to impart the students on Mathematical Foundations, Statistical Foundations, Machine Learning, Neural Networks, Artificial Intelligence andExpert System. AI and machine learning is to program computers to use example data or experience to solve a given problem. Many successful applications based on machine learning exist already, including systems that analyse past sales data to predict customer behavior (financial management), recognize faces or spoken speech, optimize robot behavior so that a task can be completed using minimum resources, and extract knowledge from bioinformatics data.

The B.Sc Artificial Intelligence & Machine Learning Career opportunities in healthcare, business, ecommerce, social networking companies, climatology, biotechnology, genetics, and other important areas. Data Scientist, Machine Learning Engineer, Software Developer or Python

Developer-Machine Learning/NLP, Gaming Expert, AI/ML Analyst-Machine Learning Engineer, Intelligence Analyst, Information Security Analyst, Image processing Engineer-Artificial Intelligence/Machine Learning, Researcher- Machine Learning.

6. M.Sc. Computational Data Science

An MSc in Computational Data Science is increasingly becoming a sought-after degree in today's data-driven world. It equips individuals with the necessary skills to extract valuable insights from vast amounts of data, driving innovation and decision-making across various industries.

Data-Driven Decision Making: Businesses rely on data to make informed decisions, optimize operations, and identify new opportunities.

Data-Centric Industries: Sectors like finance, healthcare, technology, and marketing are heavily reliant on data analysis.

Career Opportunities: Data scientists are in high demand, with roles in a wide range of industries.

The graduate of this programme will acquire the following **Advanced Skill Set:**

Programming Proficiency: Proficiency in languages like Python and R for data manipulation, analysis, and visualization.

Statistical Modeling: Understanding statistical concepts and techniques to draw meaningful conclusions from data.

Machine Learning and AI: Knowledge of machine learning algorithms and AI techniques to build predictive models.

Data Mining and Big Data: Skills to extract patterns and insights from large datasets.

Data Visualization: Ability to communicate complex data insights through effective visualizations.

In conclusion, an MSc in Computational Data Science provides a solid foundation and advanced skill set to thrive in the data-driven economy. It opens doors to exciting career opportunities, enables student to make a significant impact on society, and positions the graduate as a valuable asset in the ever-evolving world of data science.

7. B.Sc.-Data Analytics

B.Sc., Data Analytics is degree programme designed to prepare graduates who can conduct data-driven investigations, and conduct visual and advanced analytics by acquiring and managing data of all types. Through this programme, graduates will develop an in-depth understanding of data science and the techniques for analysis of quantitative and qualitative data to arrive at solutions.

Graduate will be able to identify patterns, predict trends, and analyse data from sectors such as manufacturing, banking and finance, retail, and healthcare. This programme illustrates how to apply statistics, mathematics, databases, machine learning, data mining, business intelligence and analytics, and big data engineering for decision making under uncertainty today.

The student will acquire conceptual and applications expertise required for a Data Scientist, through use of latest tools and techniques. This program will help you to learn Data Science, Big Data, Business Analytics, Predictive Analytics, R, Python, Hadoop, Spark, Marketing Analytics, Financial Analytics, Operations Analytics etc. Data scientist is one of the fastest-growing jobs in technology. The vertical mobility for this programme is fairly good by providing opportunity to pursue higher education in M.Sc. Mathematics / Statistics, M.C.A. and Data Science.

8. B.B.A. Retail Management

A Bachelor of Business Administration (B.B.A.) in Retail Management is a degree program designed to provide students with the knowledge and skills needed to manage and operate retail businesses effectively. The Bachelor of Business Administration in Retail Management is a comprehensive undergraduate program that focuses on the principles and practices essential for managing retail operations. The retail sector is nowadays a booming industry in the country creating ample job opportunities for those who have an avid interest in sales-marketing, business diversification, campaigning, advertising, market research and segmentation. With the rapid evolution of the retail industry brings the demand for retail courses that will train students to deal with the techniques, processes and methods that helps to derive greater sales and customer satisfaction.

The program combines core business courses with specialized retail management training to equip students with a well-rounded skill set for the retail industry. Students learn about the strategies and techniques involved in managing retail stores, including inventory management, customer service, and sales promotion.

The program covers marketing strategies, consumer behavior, and sales techniques to help students understand how to attract and retain customers. Courses in financial management teach students how to manage budgets, analyze financial statements, and make informed financial decisions.

Students gain insights into supply chain logistics, procurement, and distribution processes that are crucial for retail operations. This includes training on hiring, training, and managing retail staff, as well as addressing labor laws and employee relations. Students learn about the latest technological tools and systems used in retail, such as point-of-sale (POS) systems and e-commerce platforms.
This area focuses on strategies for building and maintaining strong customer relationships and loyalty. The program teaches how to develop and implement effective retail strategies, including market analysis and business planning.

The program typically combines theoretical knowledge with practical experience, often through internships, case studies, and real-world projects. This hands-on approach ensures that students are well-prepared for the dynamic and evolving retail environment. This

description outlines the general structure and focus areas of a B.B.A. in Retail Management program, but specifics may vary depending on the institution offering the degree.

The program is designed to educate the students to build career in Retail Industry. Retail management has become one of the fastest growing careers in the industry with the tremendous growth in the economy.

It strives to create a new generation of smart retail professional of international caliber and aims to equip them with the best practices being followed across the globe. BBA with Retail Management stream comprising a vast variety of sectors and home to some of the world's biggest companies as it is a dynamic industry. Students with the retail management can start career in supervisory, client communication, merchandise shipment, sales, management and administrative services. Retail management offers more than 2 million job opportunities across the globe.

9. MBA Business Analytics

An MBA in Business Analytics is a specialized graduate program that blends the traditional elements of business administration with the technical and analytical skills required to interpret and leverage data. This program is designed for individuals who are looking to gain a competitive edge in the business world by understanding how to use data to drive strategic decisions and improve business outcomes.

10. B.Sc. Honours (Biotechnology)

A B.Sc. Honours in Biotechnology is an undergraduate degree program, focusing on the study of living organisms and bioprocesses in technology, medicine, and other fields requiring bio-products. B.Sc. Honours (Biotechnology) aims to improve human health and quality of life by developing biologics, personalized medicines, and non-polluting pharmaceutics and foods. The program combines biology with technology to develop innovative solutions in various sectors, such as healthcare, agriculture, and environmental management.

In agriculture, biotechnology focuses on increasing productivity, improving nutritional quality, and developing crops with resistance or tolerance to biotic and abiotic stresses. Additionally, biotechnology contributes to sustainable agricultural growth by integrating beneficial traits into crops and enhancing food security, especially for small farmers in impoverished countries. Bio-technology also makes dent in improving the quality of economically important animal. The development of biotechnology has the potential to benefit to society and elevate living standards by advancing technology in biological processes and creating goods with therapeutic applications.

The application of biology with technology allows the scientists to put into practice the skills in order to perform genetic engineering, use the same for the treatment of diseases,

development of new medicine and perform various alterations related to humans and other life forms.

The program aids the basis of a stronger foundation for candidates who contemplate pursuing higher studies in the fields of M.Sc., M.Phil and Ph.D., Degree in Biotechnology. Aspirants are required to possess patience and scientific skills in order to perform laboratory practices as well as innovate newer scientific discoveries. This course calls for candidates to possess certain skills like innovative and far-sighted mind, ability to work on computers, have a methodical and patient disposition making them benefit the maximum from this course.

Overall, a B.Sc. Honors in Biotechnology prepares students for a dynamic and rapidly evolving field, equipping them with the knowledge and skills needed to contribute to scientific advancements and address real-world challenges

11.B.Sc. CAME

BSc CAME is **Bachelor of Science in Computer Applications, Mathematics, and Electronics** is a specialized undergraduate degree program designed to provide students with a solid foundation in three core fields: Computer Applications, Mathematics, and Electronics.

This multidisciplinary course offers a blend of theoretical knowledge and practical skills, preparing graduates for diverse career opportunities in technology, research, and development.

Computer Applications: This involves learning about computer programming, software development, database management, networking, and other IT-related subjects.

Mathematics: Courses may include topics like algebra, calculus, discrete mathematics, probability, and statistics, which form the foundation for problem-solving in computing and electronics.

Electronics: This focuses on the basics of electronic circuits, digital electronics, microprocessors, and other technologies related to hardware systems.

Graduates of this program typically acquire interdisciplinary skills that allow them to work in fields like software development, data analysis, electronics design, and IT consulting.