Sr. No.	Neme Course Outcome (CO's)	Page No.
1	Preparation of Household Chemicals –Chemistry	01
2	" A Certificate Course in Analytical Instrumentation"- Chemistry	02
3	Origin Software- Physics	03
4	Python Course –Physics	04
5	Certificate course in Sericulture and Ornamental articles- Zoology	05
6	Certificate course in Vermiculture and Vermicomposting- Zoology	05
7	Certificate course in Glass fish aquarium construction management and Maintenance- Zoology	06
8	Certificate course in Diet and Nutritional health: Zoology	07
9	Digital Marketing - Computer Science	08
10	HTML, CSS , PHP – Computer Science	09-10
11	Web Designing - Computer Science	11
12	MS-Office – Computer Science	12
13	R-Software Course – **Statistics**	13
14	MS-Excel Course- Statistics	13
15	Mushroom Cultivation- Botany	14
16	Training Course of Ecotourism of Kaas Plateau "World Natural Heritage – Botany	14
17	Mushroom Cultivation- Botany	15
18	Certificate course in Introduction to Medicinal Plants.- Botany	15
19	Certificate Course in Waste Water Treatment – Microbiology	16

20	Certificate Course in Industrial Quality Control Microbiology	17
21	Certificate Course in Basic English Grammar- English	18
22	Certificate course in Basic German Language- English	18
23	□□□□□□□ □□□□□□□□□□ □□□ □□□□□□□ □□□□□□□□□□ □□□□□□□□□□- Marathi	19
24	□□□□□ □□□□□□ □□□□□□□□□ -Hindi	20
25	Human Rights Course - History	21
26	Local Historical Tourist Guide Course - History	22
27	Travel & Tourism – Geography	23
28	Basics of Geo informatics – Geography	24
29	Certificate Course of Income Tax – Commerce	25
30	Certificate Course of Online Banking and Marketing – Commerce	25

Department of Chemistry
Bachelor of Science (B.Sc.)

Course outcome
2018-2019 to 2022-23

Sr.no.	Course name	Outcome
1	Preparation of Household Chemicals	Upon successful completion of the Certificate Course in Preparation of Household Chemicals, students will be able to learn. ➢ The students learn fundamentals household chemicals. ➢ The students define house hold products, various processes of household products ➢ The students explain preparations and reactions of household chemicals, history of household products. ➢ The students learn fundamentals of various cleaning agents. ➢ The students explain preparations and reactions of natural, floor, toilet, bathroom and kitchen cleaning agents ➢ The students learn technology of soap ➢ The students explain preparations and reactions of soap, liquid soap ➢ The students learn fundamentals of detergents and surfactants ➢ The students define detergents, surfactants ➢ 3. The students explain preparations and various types of detergents and surfactants.

Department of Chemistry

Bachelor of Science (B.Sc.)

Course outcome
2018-2019 to 2022-23

Sr.no.	Course name	Outcome
1	" A Certificate Course in Analytical Instrumentation "	Upon successful completion of the Certificate Course in Analytical Instrumentation, students will be able to learn. ➢ The knowledge, skills, and competencies required to excel in the field of analytical sciences and instrumentation. ➢ The fundamental principles underlying various analytical techniques, including spectroscopy, chromatography and electrochemical analysis. ➢ The practical competence in operating, calibrating, and maintaining a variety of analytical instruments through hands-on experience. ➢ To contribute effectively to the field of analytical sciences, ensuring accurate and reliable measurements for scientific advancement and industrial progress.

Lal Bahadur Shastri College of Arts, Science & Commerce, Satara
SATARA

Department of Physics

Bachelor of Science (B.Sc.)

Course outcome
2018-2019 to 2021-22

Sr.no.	Course name	Outcome
1	Origin Software	➢ This course aims amateur students to get a basic understanding of how to use Origin software in their research area. ➢ Recent versions of Origin have introduced and expanded on batch capabilities, with the goal of eliminating the need to program many routine operations. ➢ **A**dvanced data analysis and graphing package, widely used in sciences and engineering. ➢ Importing instrument-generated data into Origin for analysis and graphing. ➢ Creating multi-plot graphs. ➢ Spectral analysis by finding peak heights and integrating peak areas. ➢ Creating graphs whose visual presentation deepens students' understanding and conveys that understanding to the readers of their lab reports

Department of Physics
Bachelor of Science (B.Sc.)

Course outcome
2018-2019 to 2021-22

Sr.no.	Course name	Outcome
1	Python Course	➢ To understand why Python is a useful scripting language for developers. ➢ To learn how to use lists, tuples, and dictionaries in Python programs. ➢ To learn how to identify Python object types. ➢ To learn how to use indexing and slicing to access data in Python programs. ➢ To define the structure and components of a Python program. ➢ To learn how to write loops and decision statements in Python. ➢ To learn how to write functions and pass arguments in Python. ➢ To learn how to build and package Python modules for reusability. ➢ To learn how to read and write files in Python. ➢ To learn how to design object-oriented programs with Python classes. ➢ To learn how to use class inheritance in Python for reusability. ➢ To learn how to use exception handling in Python applications for error handling. ➢ To acquire programming skills in core Python. ➢ To acquire Object Oriented Skills in Python

Lal Bahadur Shastri College of Arts, Science & Commerce, Satara
SATARA

Department of Zoology
Bachelor of Science (B.Sc.)

Course outcome

Sr.no.	Course name	Outcome
1	Certificate course in Sericulture and Ornamental articles:	➢ On completion of the Sericulture course, students will be able to understand overall aspects of Sericulture, namely, Mulberry and non-mulberry silkworms and their food plants, rearing of the silkworm, Silkworm pathology, Process of silkworm seed production and silk technology. ➢ This course creates awareness among students about the economic importance and suitability of Sericulture in Indian conditions. ➢ Students will learn various technologies involved in Sericulture. ➢ Acquire knowledge of different components of sericulture industry.
2	Certificate course in Vermiculture and Vermicomposting:	➢ Acquire knowledge of Vermitechnology, role of earthworms in increasing the soil fertility, their advantages and limitations. ➢ Basic knowledge of the suitable earthworm species for vermiculture. ➢ Students will learn about Vermiculture products and their benefits in agriculture practice. ➢ Students will be trained on how to maintain a small vermicomposting bin as a simple method for converting the Kitchen waste.

Lal Bahadur Shastri College of Arts, Science & Commerce, Satara
SATARA

Department of Zoology

Bachelor of Science (B.Sc.)

Course outcome
2019-2020

Sr.no.	Course name	Outcome
1	Certificate course in Glass fish aquarium construction management and Maintenance:	➢ To make students understand the basis of classification of fish based on their characteristic features and to know about the arrangement fresh as well as main fish in India. ➢ Design own aquarium. ➢ Construct aquarium and analyze water quality parameters. ➢ Describe and identify the characters of commercially important ornamental fishes. ➢ Identify the diagnosing procedure for ornamental fish diseases. ➢ Access the role of pathogenic microbes on ornamental fish diseases.

Department of Zoology
Bachelor of Science (B.Sc.)

Course outcome

Sr.no.	Course name	Outcome
1	Certificate course in Diet and Nutritional health:	➢ Utilize knowledge from the physical and biological sciences as a basis for understanding the role of food and nutrients in health and disease processes. ➢ Provide nutrition counseling and education to individuals, groups, and communities throughout the lifespan using a variety of communication strategies. ➢ Developing diet planning skills for healthy and diseased individuals in society for better health management and prevention of diseases. ➢ Sensitization and awareness about the hazards of poor hygiene and sanitation and its management. ➢ Developing a clear understanding of human body. ➢ Developing diet planning skills for healthy and diseased individuals in society for better health management and prevention of diseases. ➢ Sensitization and awareness about the hazards of poor hygiene and sanitation and its management.

Lal Bahadur Shastri College of Arts, Science & Commerce, Satara
SATARA

Department of Computer Science

Bachelor of Science (B.Sc.)

Course outcome
2018-2019

Sr.no.	Course name	Outcome
1	Digital Marketing	After completion of course students will able to learn the holistic value of Digital marketing through research and development of an actionable marketing plan. Understanding the interconnected value of these channels and disciplines will set you apart from other marketing professionals and guide your development as a digital marketing expert. Students will be able; ➢ to use identify the issues in drafting a digital marketing plan. ➢ to use apply your knowledge about metrics in digital marketing. ➢ 3. to use measure the success of a digital marketing campaign.

Department of Computer Science

Bachelor of Science (B.Sc.)

Course outcome
2019-2020

Sr.no.	Course name	Outcome
1	HTML, CSS , PHP	Students will be able ➢ To understand basic concept of PHP. ➢ To Learn how to developing applications in PHP using MySQL. ➢ To learn and develop various PHP technology applications that definitely meets the current industry needs. ➢ How to use PHP's built-in server to serve static resources? ➢ How to use PHP to add some dynamic aspects to our pages. ➢ How to use HTML forms? ➢ To learn difference between GET and POST requests. ➢ How to use cookies to store some data in the browser and pass it to the next request.

Department of Computer Science
Bachelor of Science (B.Sc.)

Course outcome

Sr.no.	Course name	Outcome
1	HTML,CSS	Students will be able ➢ To learn HTML tag and techniques. ➢ To develop the ability to logically plan and develop web pages. ➢ To learn to write, test, and debug web pages using HTML. ➢ To learn difference between GET and POST requests. ➢ How to use cookies to store some data in the browser and pass it to the next request. ➢ To author webpages with well-structured HTML and correct CSS layout/styling patterns. ➢ To personalize web pages using text formatting, graphics, audio, and video elements. ➢ To create a webpage from start to finish by planning, designing, and implementing everything themselves.

Lal Bahadur Shastri College of Arts, Science & Commerce, Satara
SATARA

Department of Computer Science
Bachelor of Science (B.Sc.)

Course outcome

Sr.no.	Course name	Outcome
1	**Web Designing**	Students will be able ➢ To learn HTML tag and techniques. ➢ To develop the ability to logically plan and develop web pages. ➢ To learn to write, test, and debug web pages using HTML. ➢ To learn difference between GET and POST requests. ➢ How to use cookies to store some data in the browser and pass it to the next request. ➢ To author web pages with well-structured HTML and correct CSS layout/styling patterns. ➢ To personalize web pages using text formatting, graphics, audio, and video elements. ➢ To create a webpage from start to finish by planning, designing, and implementing everything themselves. ➢ To prevent repetitions among multiple projects, using bootstrap. ➢ To design that can be used to adapt screen sizes and choose what shows and what doesn't on any given device, using bootstrap. ➢ To Maintain consistency among projects when using multiple developer teams, using bootstrap. ➢ To design of prototypes, using bootstrap.

Lal Bahadur Shastri College of Arts, Science & Commerce, Satara
SATARA

Department of Computer Science

Bachelor of Science (B.Sc.)

Course outcome
2022-2023

Sr.no.	Course name	Outcome
1	MS-Office	Students will be able ➢ To understand basic concepts of Ms-Office. ➢ To demonstrate use of MS-Word. ➢ To build MS-Excel Sheets. ➢ To Design Power Point presentation.

Lal Bahadur Shastri College of Arts, Science & Commerce, Satara
SATARA

Department of Statistics

Bachelor of Science (B.Sc.)

Course outcome
2022-2023

Sr.no.	Course name	Outcome
1	R-Software Course	Students will be able ➢ to import, clean, and manipulate data using R, including data frames and basic data transformations. ➢ to perform basic statistical analysis such as descriptive statistics, hypothesis testing, and correlation analysis. ➢ to create basic data visualizations like scatterplots, histograms, and bar charts. ➢ to export their results and visualizations in various formats (e.g., CSV, Excel, and PDF).
2	MS-Excel Course	Students will be able ➢ to create, format, and edit simple spreadsheets, including entering data. ➢ to data Entry and Management: ➢ to understand and use basic Excel functions (e.g., SUM, AVERAGE, MAX, MIN). ➢ to create Basic Charts and Graphs.

Department of Botany

Bachelor of Science (B.Sc.)-CBCS

Course outcome
2018-2019, 2019-2020 and 2020-2021

Sr.no.	Course name	Outcome
1	Mushroom Cultivation	The objective of this scheme is to introduce career and market skill enhancing add on courses. That has utility for job, self-employment and improvement of students. This short duration course will has a progressive approach.

2021-2022

Sr.no.	Course name	Outcome
1	Training Course of Ecotourism of Kaas Plateau "World Natural Heritage"	The objective of this scheme is to introduce career and market skill enhancing knowledge about ecotourism. That has utility for job, self-employment and improvement of students. This short duration course will has a progressive approach.

Lal Bahadur Shastri College of Arts, Science & Commerce, Satara
SATARA

Department of Botany

Bachelor of Science (B.Sc.)-CBCS

Course Outcome
2022-23

Sr.no.	Course name	Outcome
1	Mushroom Cultivation	➢ The objective of this scheme is to introduce career and market skill enhancing add on courses. That has utility for job, self-employment and improvement of students. This short duration course will has a progressive approach.
2	Certificate course in Introduction to Medicinal Plants.	➢ Promotion of cultivation and conservation of Medicinal Plants. ➢ To identify the plants to be conserved /cultivation and those conserved in the fields. ➢ To preparation of Ayurvedic Kadha, Churn, herbal hair oil, herbal shampoo.

Department of Microbiology

Bachelor of Science (B.Sc.)

Course Outcome
2022-23

Sr.no.	Course name	Outcome
1	Certificate Course in Waste Water Treatment	After completion of this course, Students will be able to: ➢ Became familiar with profile of different kinds of waste ➢ Should become aware about effect of waste water on environment. ➢ Should became familiar about pollution due to waste water ➢ Learn about the basic processes about treatment of waste water. ➢ Can able to handle industrial waste water treatment plant ➢ Use the knowledge to work in related organizations.

Lal Bahadur Shastri College of Arts, Science & Commerce, Satara
SATARA

Department of Microbiology
Bachelor of Science (B.Sc.)

Course Outcome

Sr.no.	Course name	Outcome
1	Certificate Course in Industrial Quality Control Microbiology	A candidate who wish to complete Course needs to have acquired/developed following competencies: ➢ Acquired knowledge and understanding of the microbiology concepts as applicable to diverse areas such as medical, industrial, environment, genetics, agriculture, food and others industries. ➢ Demonstrate key practical skills/competencies in working with microbes for study and use in the laboratory as well as outsideCompetent enough to use microbiology knowledge and skills to analyze problems involving microbes, articulate these with peer's/ team members/ other stake holders, and undertake remedial measures/studies etc. ➢ Developed a broader perspective of the discipline of industrial quality control Microbiology to enable him to identify challenging industrial problems and plan his professional career

Department of English

Bachelor of Arts (B.A.)

Course outcome

Sr.no.	Course name	Outcome
1	Certificate Course in Basic English Grammar.	Students will be able ➢ Students will heighten their awareness of the correct usage of English grammar in writing and speaking ➢ Students will improve their speaking ability in English both in terms of fluency and comprehensibility ➢ Students will give oral presentations and receive feedback on their performance
2	Certificate course in Basic German Language.	➢ To introduces learners to diverse cultures, ways of expression and communication with other speakers of the foreign language ➢ To enhance literacy development in both the official languages and the foreign language. ➢ provides the opportunity to study in Germany ➢ Availability of career opportunity.

Lal Bahadur Shastri College of Arts, Science & Commerce, Satara
SATARA

Department of Marathi

Bachelor of Arts (B.A.)

Course outcome

Sr.no.	Course name	Outcome
1	ग्रामीण पत्रकारिता आणि जनसंवाद प्रमाणपत्र अभ्यासक्रम	➢ भाषिक कौशल्ये विकसित करण्याची क्षमता प्राप्त करणे. ➢ भाषेचे उपयोजित मूल्ये समजावून घेणे. ➢ तंत्रज्ञानआणि भाषा सहसंबंध जाणून घेणे. ➢ भाषेचे व्यवसायिक स्वरूप समजावून घेणे.

Department of Hindi

Bachelor of Arts (B.A.)

Course outcome

Sr.no.	Course name	Outcome
1	हिंदी अनुवाद प्रशिक्षण	➢ छात्रों में हिंदी अनुवाद एवं व्यवहारिक लेखन कौशल विकसित होगा। ➢ कार्यालय और व्यवसाय में हिंदी भाषा कौशल विकसित होगा। ➢ छात्र रोजगार उन्मुख शिक्षा एवं कौशल से अवगत होंगे। ➢ छात्र हिंदी भाषा के अनुवाद कौशल आत्मसात करके हिंदी साहित्य कृति का मातृभाषा में सफल अनुवाद करेंगे । ➢ छात्र मातृभाषा या राष्ट्रभाषा के साहित्य का विदेशी भाषा में सफल अनुवाद करेंगे ।

Lal Bahadur Shastri College of Arts, Science & Commerce, Satara
SATARA

Department of History

Bachelor of Arts (B.A.)

Course outcome

Sr.no.	Course name	Outcome
1	Human Rights Course	➢ Able to understand the human rights philosophy. ➢ Able to recognize the importance of human rights. ➢ Able to understand the various issues concerned with human rights violation and tools for its protection. ➢ Understand the core principles of human rights philosophy. ➢ Recognize the importance of various important human rights documents. ➢ It will create awareness among learners about the evolution and development of Human Rights. ➢ Develop awareness of how human rights can be translated into social and political Reality. ➢ Indian Constitution ensures human rights by guaranteeing fundamental rights to every. citizen of India. ➢ Able to identify how different human rights are protected.

Lal Bahadur Shastri College of Arts, Science & Commerce, Satara
SATARA

Department of History

Bachelor of Arts (B.A.)

Course outcome

Sr.no.	Course name	Outcome
2	Local Historical Tourist Guide Course	➢ Tour Guide Career is the growing field which offers good opportunities in the field of tour packages, Historical places, Sight – seeing, etc. ➢ The growth of travel and tourism industry has opened up lots of job opportunities not only in local, States, India but also in all over the world. ➢ A tour guide gets the opportunity to see the world. It is a job with no time limit. ➢ It is a good career industry but very competitive. In our Satara District like Mahabaleshwar, Panchgani, KassPlatu, Koyana, Pratapgad, Sajjangad, Sataraetc. the heavy demand of tour guides. ➢ After completing the courses, you can build a career as a tourist guide in both private & public sector organizations. ➢ You can also work in tourism departments and tourism directorates of the union and state governments. ➢ With the experience of tour guide you can also work as a tour operator, as a regional tour supervisor and manager.

Lal Bahadur Shastri College of Arts, Science & Commerce, Satara
SATARA

Department of Geography

Bachelor of Arts (B.A.)

Course outcome

Sr.no.	Course name	Outcome
1	Travel & Tourism	➢ Ability to develop understanding and analyzing skills. ➢ Develops interpersonal communication. ➢ Recognize about employment opportunities. ➢ Develop basic computer and telecommunications practices and techniques to facilitate the completion of administration tasks. ➢ Improve the Entrepreneurial excellence. ➢ Develop ongoing personal professional development strategies and plans to enhance career opportunities.

Lal Bahadur Shastri College of Arts, Science & Commerce, Satara
SATARA

Department of Geography

Bachelor of Arts (B.A.)

Course outcome

Sr.no.	Course name	Outcome
2	Basics of Geoinformatics	➢ An ability to independently carry out investigation and development work to solve real life geospatial problems. ➢ Through this course student should be able to understand the basic concepts and principles of remote sensing, GIS, and GNSS techniques. ➢ Through these course students should be able to understand GIS for various Applications, customization of GIS tools etc. ➢ This course provides effective leaning of industry orientated techniques related to the subject, personality development, Communication skills etc. ➢ Through these course students should be able to understand the fundamentals of digital and aerial photogrammetric techniques and its applications etc. ➢ Provides practical knowledge of advance remote sensing techniques in identification and mapping of land surface features etc. ➢ Provides practical knowledge of interpretation and information extraction from aerial photographs and geometric measurements using photogrammetry etc. ➢ Through these course students should be able to understand various image processing techniques, information extraction, data interpretation and its basic concepts and applications etc. ➢ Provides practical knowledge of various image processing techniques, etc.

Lal Bahadur Shastri College of Arts, Science & Commerce, Satara
SATARA

Department of Commerce

Bachelor of Commerce (B.Com.)

Course outcome

Sr.no.	Course name	Outcome
1	Certificate Course of Income Tax	➢ Acquaintance with the basic principles of Income Tax. ➢ To enable the students to calculate taxable Income & tax liability
2	Certificate Course of Online Banking and Marketing	➢ Acquaint basic principles of Online Banking and Marketing. ➢ To Enable to the students to operate Online Banking and Marketing Transactions

Lal Bahadur Shastri College of Arts, Science & Commerce, Satara
SATARA