



OFFICE OF THE PRINCIPAL
GOVERNMENT AUTONOMOUS COLLEGE, ANGUL
PROGRAMME OUTCOMES(PO) : UG

This HEI has clearly stated the Programme Outcomes to disseminate aim and objectives to its stakeholders. The teachers and students are introduced to the POs for better teaching and learning following the mechanism stated below:-

- Hard Copy of syllabus is available in the departments for ready reference to the teachers and students.
- The entire syllabus is available in the HEI website for reference of its stakeholders.
- Students are introduced to the syllabus having POs in the induction meeting organized at the very beginning of their enrollment to the programme.
- The importance of the learning outcomes has been communicated to the teachers.
- The students are also made aware of the same through departmental and proctorial meetings.

There are 20 UG Programmes introduced in this HEI;-

- Arts: Economics, Education, English, Geography, Hindi, History, Mathematics, Odia, Philosophy, Political Science, Sanskrit and Sociology
- Science: Botany, Chemistry, , Computer Science, Geology, Mathematics, Physics and Zoology,
- Commerce

PROGRAMME OUTCOMES:UG

S.No	Programme Name	Outcome
1	Economics	<ul style="list-style-type: none">• The programme illustrates how microeconomic concepts can be applied to analyze real-life situations.• This programme introduces students to formal modeling of a macro-economy in terms of analytical tools. It discusses various alternative theories of output and employment determination in a closed economy.• The students develop the notion of probability, followed by probability distributions of discrete and continuous random variables and are introduced to the most frequently used theoretical distribution i.e. Normal distribution• The emphasis will be on giving conceptual clarity to the students coupled with the use of mathematical tools and reasoning.• It develops the skill to make better decisions in business environment and even in their personal choices.• To impart the knowledge of Banking, Marketing and different sectors of the economy so that students will get job opportunities in different economic, financial, banking and marketing fields..
2	Education	<ol style="list-style-type: none">1. It introduces students to the ambit of nature and scope of education and pedagogic process through enriched experiences.2. Contribute to fill up the gap between theory and practice in teaching and learning process.3. It develops critical thinking, understanding various educational issues in the context of diverse socio- cultural & Multilingual Indian Society.4. It enables to face the challenges of socio-political and technological issues.5. Understand the nature, purpose, influencing factors and problems of all levels of education in contemporary issues.6. Understands various level learners, their needs, interest and peculiar problems to motivate them for learning.7. Conduct Pedagogical content analysis in subject areas and use it for facilitating learning in the classroom.8. Effective use and utilization of Information Communication Technology resources, on-line as well as off line for day-to-day classroom teaching.

3	English	<ol style="list-style-type: none"> 1. To introduce students to British poetry and drama from the 14th to the 17th century. It helps students sample and explore certain seminal texts from the early modern period, covering the genesis of modern English poetry and the Renaissance that set British poetry and drama on their glorious course to greatness. 2. To acquaint students with a remarkable, newly evolved form of literature: the essay. The period is also known for its shift of emphasis from reason to emotion. 3. The students will be able to sample some seminal works of the Romantic age which gave expression to the key ideas of the period such as return to nature, subjectivity, desire for personal freedom and the defiance of classicism-imposed restrictions on poetic form. 4. To introduce students to the best of experimental and innovative dramatic literature of modern Europe. 5. To introduce students to genres such as children's literature, detective fiction and campus fiction, which have a "mass" appeal, and can help us gain a better understanding of the popular and folk roots of literature.
4	Geography	<ol style="list-style-type: none"> 1. It develop the skills including critical thinking, problem solving, reasoning, analysis, interpretations and synthesizing information's and communication literacy, media and internet literacy, data interpretation and analysis and computer programming. 2. It imparts the knowledge about different spatial location and how they relate with each other. 3. It helps the students to identify and appreciate important events and National and International policies; make better and informed decisions regarding the best use of Natural resources. 4. It helps the students to know about the relationship between human being and the environment and the general process of natural resources. 5. It enables the students to understand how population growth and technological advances affect the environment. 6. It help the students to gain the understanding of International matters and multicultural concerns, interpretation of maps, interpret local and global information and understand International networks for trade. 7. It helps the students to understand Disaster Management and mitigation of hazardous situations.
5	History	<ol style="list-style-type: none"> 1. The programme offers knowledge in Indian History from prehistory to attainment of Independence. 2. It enables the students to trace Evolution of Man in Indian sub-

		<p>continent.</p> <ol style="list-style-type: none"> 3. It provides knowledge in the expansion of Agrarian Economy and social developments in India. 4. It creates interest towards the cultural and historical developments in India. 5. It helps the students to understand various historical incidents to face various competitive examinations. 6. It develops critical thinking and research skills to explore the past.
6	Hindi	<ul style="list-style-type: none"> • Students will have indepth knowledge of Hindi language and literature. • The programme includes major genres of Hindi literature such as poetry, prose, drama, and criticism, in historical, cultural, and social contexts. • It enhances the ability to analyze and critique literary works, fostering logical and critical thinking skills. • It develops skills in translation, journalism, and creative writing, preparing them for professional and academic fields. • The Programme introduces to research methodologies, equipping for higher education and research activities.
7	Mathematics	<ul style="list-style-type: none"> • Students will be enabled to critically analyze a given problem, understand and build mathematical model to represent the problem, solve the resulting equations and interpret the resulting solution. • It enables to understand abstract ideas and rigorous methods in mathematical analysis. • It introduces to relational understanding of mathematical concepts and concerned structures, and mathematical reasoning. • It enhances ability to analyse a problem, identify and define the computing requirements. • Introduction to various aspects like group theory, ring theory, field theory, metric spaces, number theory. • Enhancing students' overall development and to equip them with mathematical modeling abilities, problem solving skills, creative talent and power of communication necessary for various kinds of employment. • Ability to pursue advanced studies and research in pure and applied mathematical science.
8	Odia	<ol style="list-style-type: none"> 1. This programme introduces students to the history, objectives and importance of Odia language and literature. 2. This programme consists of various aspects of applied linguistics, computerization of Odia language, language communication, film making, research methodology and various aspects of Odia literature in different times.

		<p>3. It caters to the need of all categories of students for communication skill, Ability Enhancement skill and National and state Level competitive exams.</p>
9	Philosophy	<p>1. The students will be able to learn the art of rational and critical thinking. They will also acquire the skill of thinking afresh and creative.</p> <p>2. Study of Philosophy will also enable the students to learn the semantics of language and its proper use.</p> <p>3. The students shall be able to know about values, ethics and fundamental nature of knowledge, reality and existence.</p> <p>4. The students shall be able to know about theories of metaphysics, epistemology, values, and aesthetics.</p> <p>5. This programme will give a fundamental knowledge of logic and philosophy to the students which will help them to get through competitive examinations and also face the challenges of life.</p>
10	Political Science	<p>1. The programme acquaints students with the Constitutional design of state structures and institutions.</p> <p>2. It helps the students to learn about conflicting impulses of liberty and justice, territorial decentralization and a strong union.</p> <p>3. It familiarizes students with the working of the Indian state, paying attention to the contradictory dynamics of modern state power.</p> <p>4. It focuses on examining politics in a historical framework while engaging with various themes of comparative analysis in developed and developing countries.</p> <p>5. It creates awareness of the implicit Euro-centrism of International Relations by highlighting certain specific perspectives from the Global South.</p> <p>6. The programme introduces issues, literature and methods of comparative politics.</p>
11	Sanskrit	<p>1. The programme offers important aspects of Sanskrit language and literature i.e, prose, poetry, grammar with certain sections of Bhagavad Gita and Mahabharata.</p> <p>2. It develops skills on creative writing and grammar.</p> <p>3. It enables the students to critically analyze various scientific Sanskrit texts on astrology, astronomy Ayurveda, Arthashastra, and smriti literature.</p>
12	Sociology	<p>1. This programme presents a comprehensive and integrated picture of Indian society.</p> <p>2. It disseminates knowledge on social environment to protect and preserve the practices.</p> <p>3. It provides an idea to the students about the process of social change.</p>

		<ol style="list-style-type: none"> 4. It inculcates the ideas of gender sensitivity and promotes gender neutral. 5. This will lead to change the prevalent biases and gender practices and create a gender neutral social world where both men and women can enjoy their basic rights and cherish to achieve their dreams. 6. To enable the student to understand the society in a better manner, to note the heterogeneities in culture, institutions and their functions, changes, the contrasts found between the rural urban societies and the problems faced by the people.
13	Commerce	<ul style="list-style-type: none"> • The objective of this programme is to impart Commerce education with an employability outlook. • The focus is on being making students' future-ready i.e. to become entrepreneurs or executives in the industry by equipping students with a holistic view of the business environment and its operations. • The thrust of the programme is on personality development of the students through helping to acquire conceptual, analytical, problem-solving capabilities and emotional maturity. • The innovative curriculum and pedagogy will equip participants with actionable knowledge and skills along with deep insights into leadership and strategy.
14	Botany	<ol style="list-style-type: none"> 1. The programme helps to gain knowledge on botanical research in the field of agriculture, forestry, horticulture and plant breeding. 2. It helps to gain knowledge on environmental conservation and genetic modification of plants. 3. The degree holders shall have plenty of opportunities in the field of research and development, pharmaceuticals, chemical industries, public health and environmental protection sectors.
15	Chemistry	<ol style="list-style-type: none"> 1. The Programme enables to understand basic facts and concepts in chemistry and gain theoretical as well as practical knowledge of handling chemicals. 2. It expands knowledge on various aspects of Chemistry and creates opportunities for employability. 3. It helps to acquire skills to design, execute and document of laboratory experiments in research, academia, or chemical industry. 4. It enhances the skill in handling instruments and various safety majors in work place. 5. It enables the students to succeed in different chemical industries like cement industry, steel/ aluminium industries, paint industries, rubber industries, petrochemical industries, fertilizer industries, food processing industries, etc.

16	Computer Science	<ol style="list-style-type: none"> 1. To learn basics of C programming language. To be able to develop logics to create programs/ applications in C. 2. To understand different methods used for the simplification of Boolean functions and binary arithmetic. 3. To design and implement combinational circuits, synchronous & asynchronous sequential circuits. 4. To study specific data structures such as arrays, linear lists, stacks, queues, hash tables, binary trees, binary search trees, heaps and AVL trees. 5. To learn the use of Java language and the Java Virtual Machine 6. To learn how do computers and terminals actually communicate with each other. 7. To understand the parts of a communication network and how they work together. 8. To learn the fundamentals of web designing, to design and develop standard and interactive web pages and to learn some popular web scripting languages.
17	Geology	<ol style="list-style-type: none"> 1. This programme enables to understand the basic concepts of earth science i.e. Components of earth, their structure, composition, origin and the processes that act on them. 2. It offers the basics of mineralogy, crystallography and composition of geological materials. 3. Students will learn about the need for sustainable development in the context of societal and environmental development. 4. Students will be introduced to geological principles to make decisions about resource management and predict natural disasters. 5. It will help to identify and classify rocks, minerals and fossils to interpret geological maps and satellite images. 7. It inculcates the techniques of remote sensing and photo geology.
18	Mathematics	<ul style="list-style-type: none"> • Students will be enabled to critically analyze a given problem, understand and build mathematical model to represent the problem, solve the resulting equations and interpret the resulting solution. • It enables to understand abstract ideas and rigorous methods in mathematical analysis. • It introduces to relational understanding of mathematical concepts and concerned structures, and mathematical reasoning. • It enhances ability to analyse a problem, identify and define the computing requirements. • Introduction to various aspects like group theory, ring theory, field theory, metric spaces, number theory. • Enhancing students' overall development and to equip them with mathematical modeling abilities, problem solving skills, creative talent and power of communication necessary for

		<p>various kinds of employment.</p> <ul style="list-style-type: none"> • Ability to pursue advanced studies and research in pure and applied mathematical science.
19	Physics	<ol style="list-style-type: none"> 1. This programme emphasizes students to acquire adequate knowledge about the subject matter. 2. Besides acquiring appropriate knowledge of the subject, it also crafts a foundation for higher learning. 3. It also guides the students to be initiated into the basics of research in various branches of physics. 4. The students shall able to attain the skills, i.e., “learning by doing” from various laboratory courses designed in this programme. 5. This programme offers students to become empowered to face the challenges of the changing world as a whole.
20	Zoology	<ol style="list-style-type: none"> 1. The students shall be able to know about Animals and Biodiversity, Animal Cell, Structure of Nucleus: Nuclear envelope, Nuclear pore complex, Nucleolus; Chromatin: Euchromatin and Hetrochromatin and packaging (nucleosome); Mitosis, Meiosis, Cell cycle and its regulation; GPCR and Role of second messenger (cAMP) 2. The students shall able to know about Locomotion and Reproduction in Protista, general characteristics and Classification up to classes, Canal system and spicules in sponges. 3. The students shall able to know about Study of an aquatic ecosystem: Phytoplankton and zooplankton collection, preservation and mounting, Measurement of temperature, turbidity/penetration of light, determination of pH, Dissolved Oxygen content (Winkler’s method), BOD, COD, Free CO₂, Hardness, TDS. 4. Extensive Knowledge shall be provided to the students on Human Body, Body Parts and their functioning and abnormalities including Life-style diseases, Communicable and non-communicable disorders, Immunity and Auto immunity, etiology and diagnosis of diseases including ELISA, RIA, UV-Vis Spectrophotometry, Microscopy, Electrophoresis, Tissue and Cell Culture, Southern blotting, DNA fingerprinting, etc 5. The students shall able to know about Biological data, graphical representation of data (frequency polygon and histogram),

		<p>sampling techniques, measures of central tendency (Mean, median and mode), Measures of dispersion (range, quartile deviation, mean deviation and standard deviation), Hypothesis and hypothesis testing (Chi-square test, t- test). ANOVA, Chi-square test and Correlation and regression and to be taught to enhance the research ability of the students.</p> <p>6. All students shall design and prepare a project of their interest and submit it before award of the final degree under the supervision of a guide and to be trained in the research field.</p>
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Academic Bursar *13/7/24*

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