



शहीद महेन्द्र कर्मा विश्वविद्यालय, बस्तर
धरमपुरा-2, जगदलपुर, जिला-बस्तर, छत्तीसगढ़, भारत पिनकोड 494001

New Syllabus of
B.Sc. Home Science Part-I
w.e.f. Session 2023-24
Annual Examination Pattern

Shaheed Mahendra Karma Vishwavidyalaya, Bastar
Dharampura-2, Jagdalpur, Distt.-Bastar, Chhattisgarh, India, Pincode 494001

General Information of B.Sc. Home Science Program

1. **Title and code of the program:** The title of the programme shall be Bachelor of Home Science (B.Sc. H.Sc.) The program code of B.Sc. Home Science shall be "HSc2022".
2. **Eligibility for admission:** Eligibility of admission in B.Sc. Home Science will be as follow:
 - i. Students must pass H.Sc. (Class 12th) in any stream/Three year diploma course in any branch of technical education / Vocational Education or equivalent from a recognized board.
 - ii. Students must have a minimum aggregate of 40% marks in HSc examination (Relaxation in percentage will be as per rule of C.G. Govt.).
3. **Scheme of examination:** Each theory paper is divided into three components as follow, there shall not be any Internal Assessment (IA) for practical part of every subject :-
 - i. Total Marks:100 Marks
 - ii. University Examination (UE): 60 Marks
 - iii. Internal Assessment (IA): 15 Marks
 - iv. Practical : 25 Marks
4. **Internal Assessment (IA):** The structure of IA shall be as follow:
 - i. **Internal test (15 Marks):** There shall be two internal tests of 15 marks each, the average of both tests shall be considered as the marks of internal test. The marks of assignment shall be of 15, the average of the both tests shall be added with marks of assignment, and the total will be divided by two.
5. **University Examination (UE):** The pattern of examination shall be as follow:
 - i. There shall be three sections of question paper: A, B and C.
 - ii. Section A (20 Marks) shall consists "Very Short Answer questions", Three questions from each unit with internal choice of solving two.
 - iii. Section B (20 Marks) shall consist of "Short answer questions" from each unit, two questions from each unit with internal choice of solving one.
 - iv. The Section C (20 Marks) shall consist "Long answer questions", one from each unit, with internal choice of solving any two questions, each has 10 marks.
6. **Programme Learning Outcomes (PLO):** On completion of this programme, the students are expected to:

PLO1: To Apply knowledge of Basic Nutrition, Textile and Fibre Science, Resource Management , Community Development , Human Development with basic knowledge of women empowerment and Computer Basics at the individual level , community level and also on commercial level.

PLO2: To apply knowledge of nutrition as Medical Nutrition Therapy for disease correction, Technical knowledge of physio-chemical nature of textile fibres and yarn making, working of various systems in human body, Skillful communication techniques, Developmental stages in life cycle and consumer economics related knowledge.

PLO3: To apply knowledge of Biochemistry of Macro molecules as Protein, Lipids, Carbohydrates and Micro-Molecules as Vitamin, Minerals, Antioxidants, Preservation Technology, Extension education for the community and national benefit, Care of human in early years of life, Principles of Art and Designing and skills of apparel making with fashion designing.

PLO4: To apply new technology in the field of Nutrition as Neutrogenomics, Nanotechnology for Medical Nutrition Therapy, Management of human resources properly, advances in Textile science, advances in Human developments as maintenance of good mental health and Research Methodology with latest data collection and analysis details in the field of Home Science Research.



B.Sc. (HOME SCIENCE)

Year	Course Code	Subject Name	Theory / Practical	Total Credit	Marks			
					UE	IA	Total	
							Max	Min
First	HSCF-1T	Environmental studies	Theory	4	60	15	75	25
	HSCF-2T	Hindi Language	Theory	4	60	15	75	25
	HSCF-3T	English Language	Theory	4	60	15	75	25
	HSC-1T	Basic Nutrition	Theory	4	60	15	75	25
	HSC-2T	Introduction to Resource Management	Theory	4	60	15	75	25
	HSC-3T	Introduction to Human Development	Theory	4	60	15	75	25
	HSC-4T	Textile and Clothing	Theory	4	60	15	75	25
	HSC-5T	Community Development	Theory	4	60	15	75	25
	HSC-6T	Personal Empowerment and Computer Basics	Theory	4	60	15	75	25
	HSCF-1P	Environmental Study Field work	Practical	2	25	NA	25	25
	HSC-1P	Basic Nutrition	Practical	2	25	NA	25	09
	HSC-2P	Introduction to Resource Management	Practical	2	25	NA	25	09
	HSC-3P	Introduction to Human Development	Practical	2	25	NA	25	09
	HSC-4P	Textile and Clothing	Practical	2	25	NA	25	09
	HSC-5P	Community Development	Practical	2	25	NA	25	09
	HSC-6P	Personal Empowerment and Computer Basics	Practical	2	25	NA	25	09
		Total			50	715	135	850

Second	HSCF-4T	Hindi Language	Theory	4	60	15	75	25
	HSCF-5T	English Language	Theory	4	60	15	75	25
	HSC-7T	Nutritional Management in Health & Diseases	Theory	4	60	15	75	25
	HSC-8T	Textile and Fiber Science	Theory	4	60	15	75	25
	HSC-9T	Human Physiology and Community Nutrition	Theory	4	60	15	75	25
	HSC-10T	Communication Process	Theory	4	60	15	75	25
	HSC-11T	Life Span Development	Theory	4	60	15	75	25
	HSC-12T	Consumer Economics	Theory	4	60	15	75	25
	HSC-7P	Nutritional Management in Health and Diseases	Practical	2	25	NA	25	09
	HSC-8P	Textile and Fiber Science	Practical	2	25	NA	25	09
	HSC-9P	Human Physiology and Community Nutrition	Practical	2	25	NA	25	09
	HSC-10P	Communication Process	Practical	2	25	NA	25	09
	HSC-11P	Life Span Development	Practical	2	25	NA	25	09
	HSC-12P	Consumer Economics	Practical	2	25	NA	25	09
	Total			44	630	120	750	

Third	HSCF-6T	Hindi Language	Theory	4	60	15	75	25
	HSCF-7T	English Language	Theory	4	60	15	75	25
	HSC-13T	Nutritional Biochemistry	Theory	4	60	15	75	25
	HSC-14T	Food Preservation	Theory	4	60	15	75	25
	HSC-15T	Early Childhood Care and Education	Theory	4	60	15	75	25
	HSC-16T	Extension Education	Theory	4	60	15	75	25
	HSC-17T	Foundation of Art and Design	Theory	4	60	15	75	25
	HSC-18T	Apparel Making and Fashion Designing	Theory	4	60	15	75	25
	HSC-13P	Nutritional Biochemistry	Practical	2	25	NA	25	09
	HSC-14P	Food Preservation	Practical	2	25	NA	25	09
	HSC-15P	Early Childhood Care and Education	Practical	2	25	NA	25	09
	HSC-16P	Extension Education	Practical	2	25	NA	25	09
	HSC-17P	Foundation of Art and Design	Practical	2	25	NA	25	09
	HSC-18P	Apparel Making and Fashion Designing	Practical	2	25	NA	25	09
		Total		44	630	120	750	

Note- There shall be four extra credits in each year for internship/ Apprenticeship .The certificate of extra credits for this would be provided by the concern university and it is not mandatory.

Abbreviations Used- UE: University Examination IA: Internal Assessment

Note:

1. Students have to pass the Environment Studies (Additional & Compulsory) till the end of the maximum duration provided for the program. Degree will not be awarded without passing the environmental studies paper.
2. There shall be four extra credits in all the years of under graduation for internship/apprenticeship/Skill development program/Value added program. The certificate of extra credits would be provided by the university concern and is not mandatory.



B.Sc. (CLINICAL NUTRITION)**(Student drops Botany, instead study Clinical Nutrition)**

Year	Course Code	Subject Name	Theory / Practical	Total Credit	Marks			
					UE	IA	Total	
							Max	Min
First	CN-1T	Anatomy and Physiology	Theory	4	60	15	75	25
	CN-2T	Physiology and Basic Nutrition	Theory	4	60	15	75	25
	CN -1P	Anatomy and Physiology	Practical	2	50	NA	50	17
Second	CN-3T	Biochemistry and Microbiology	Theory	4	60	15	75	25
	CN-4T	Basic Dietetics and Community Nutrition	Theory	4	60	15	75	25
	CN -2P	Biochemistry and Microbiology	Practical	2	50	NA	50	17
Third	CN-5T	Nutrition for Health and Fitness	Theory	4	60	15	75	25
	CN-6T	Advanced Dietetics	Theory	4	60	15	75	25
	CN -3P	Advanced Dietetics	Practical	2	50	NA	50	17

Note- There shall be four extra credits in each year for internship/ Apprenticeship .The certificate of extra credits for this would be provided by the concern university and it is not mandatory.

The foundation courses will be as per common syllabus of any B.Sc. program me.

Abbreviations Used- UE: University Examination IA: Internal Assessment

B.Sc. (Food Science & Quality Control)

(Student drops Botany, instead study Food Science and Quality Control)

Year	Course Code	Subject Name	Theory / Practical	Total Credit	Marks			
					UE	IA	Total	
							Max	Min
First	FQ-1T	Basic Nutrition and Food Chemistry	Theory	4	60	15	75	25
	FQ-2T	Food Microbiology and Sanitation	Theory	4	60	15	75	25
	FQ-1P	Food Microbiology	Practical	2	50	NA	50	17
Second	FQ-3T	Food Preservation, Sensory Evaluation and Food Packaging	Theory	4	60	15	75	25
	FQ-4T	Post Harvest Technology and Analytical Instrumentation	Theory	4	60	15	75	25
	FQ-2P	Analytical Instrumentation	Practical	2	50	NA	50	17
Third	FQ-5T	Food Analysis and Food Toxicology	Theory	4	60	15	75	25
	FQ-6T	Food Manufacturing, Adulterating and Testing	Theory	4	60	15	75	25
	FQ-3P	Food Analysis	Practical	2	50	NA	50	17

Note- There shall be four extra credits in each year for internship/ Apprenticeship .The certificate of extra credits for this would be provided by the concern university and it is not mandatory.

The foundation courses will be as per common syllabus of any B.Sc. programme.

Abbreviations Used- UE: University Examination IA: Internal Assessment

Part - I
SYLLABUS FOR ENVIRONMENTAL STUDIES AND HUMAN RIGHTS
(Paper code-0828)

MM. 75

इन्वारमेंटल साईंसेस के पाठ्यक्रम को स्नातक स्तर भाग—एक की कक्षाओं में विश्वविद्यालय अनुदान आयोग के निर्देशानुसार अनिवार्य रूप से शिक्षा सत्र 2003—2004 (परीक्षा 2004) से प्रभावशील किया गया है। स्वशासी महाविद्यालयों द्वारा भी अनिवार्य रूप से अंगीकृत किया जाएगा।

भाग 1, 2 एवं 3 में से किसी भी वर्ष में पर्यावरण प्रश्न—पत्र उत्तीर्ण करना अनिवार्य है। तभी उपाधि प्रदाय योग्य होगी।

पाठ्यक्रम 100 अंकों का होगा, जिसमें से 75 अंक सैद्धांतिक प्रश्नों पर होंगे एवं 25 अंक क्षेत्रीय कार्य (Field Work) पर्यावरण पर होंगे।

सैद्धांतिक प्रश्नों पर अंक — 75 (सभी प्रश्न इकाई आधार पर रहेंगे जिसमें विकल्प रहेगा)

- (अ) लघु प्रश्नोंत्तर — 25 अंक
(ब) निबंधात्मक — 50 अंक

Field Work — 25 अंकों का मूल्यांकन आंतरिक मूल्यांकन पद्धति से कर विश्वविद्यालय को प्रेषित किया जावेगा। अभिलेखों की प्रायोगिक उत्तर पुस्तिकाओं के समान संबंधित महाविद्यालयों द्वारा सुरक्षित रखेंगे।

उपरोक्त पाठ्यक्रम से संबंधित परीक्षा का आयोजन वार्षिक परीक्षा के साथ किया जाएगा।

पर्यावरण विज्ञान विषय अनिवार्य विषय है, जिसमें अनुत्तीर्ण होने पर स्नातक स्तर भाग—एक के छात्र/छात्राओं को एक अन्य विषय के साथ पूरक की पात्रता होगी। पर्यावरण विज्ञान के सैद्धांतिक एवं फील्ड वर्क के संयुक्त रूप से 33: (तीस प्रतिशत) अंक उत्तीर्ण होने के लिए अनिवार्य होंगे।

स्नातक स्तर भाग—एक के समस्त नियमित/भूतपूर्व/अमहाविद्यालयीन छात्र/छात्राओं को अपना फील्ड वर्क सैद्धांतिक परीक्षा की समाप्ति के पश्चात् 10 (दस) दिनों के भीतर संबंधित महाविद्यालय/परीक्षा केन्द्र में जमा करेंगे एवं महाविद्यालय के प्राचार्य/केन्द्र अधीक्षक, परीक्षकों की नियुक्ति के लिए अधिकृत रहेंगे तथा फील्ड वर्क जमा होने के सात दिनों के भीतर प्राप्त अंक विश्वविद्यालय को भेजेंगे।

UNIT-I THE MULTI DISCIPLINARY NATURE OF ENVIRONMENTAL STUDIES

Definition, Scope and

Importance Natural Resources:

Renewable and Nonrenewable Resources

- (a) Forest resources: Use and over-exploitation, deforestation, Timber extraction, mining, dams and their effects on forests and tribal people and relevant forest Act.
- (b) Water resources: Use and over-utilization of surface and ground water, floods drought, conflicts over water, dam' s benefits and problems and relevant Act.
- (c) Mineral resources: Use and exploitation, environmental effects of extracting and using mineral resources.
- (d) Food resources: World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity.
- (e) Energy resources: Growing energy needs, renewable and non-renewable energy sources, use of alternate energy sources.
- (f) Land resources: Land as a resource, land degradation, man induced landslides soil erosion and desertification.

(12 Lecture)

UNIT-II ECOSYSTEM

(a) Concept, Structure and Function of and ecosystem

- Producers, consumers and decomposers.
- Energy flow in the ecosystem
- Ecological succession
- Food chains, food webs and ecological pyramids.
- Introduction, Types, Characteristics Features, Structure and Function of Forest, Grass, Desert and Aquatic Ecosystem.

(b) Biodiversity and its Conservation

- Introduction - Definition: genetic. species and ecosystem diversity
- Bio-geographical classification of India.
- Value of biodiversity: Consumptive use. Productive use, social ethics, aesthetic and option values.
- Biodiversity at global, National and local levels.
- India as mega-diversity nation.

- Hot spots of biodiversity.
- Threats to biodiversity: habitat loss, poaching of wildlife, man-wild life conflict.
- Endangered and endemic species of India.
- Conservation of biodiversity: In situ and Ex-situ conservation of biodiversity.

(12 Lecture)

UNIT- III

(a) Causes, effect and control measures of

- Air water, soil, marine, noise, nuclear pollution and Human population.
- Solid waste management: Causes, effects and control measures of urban and industrial wastes.
- Role of an individual in prevention of pollution.
- Disaster Management: floods, earthquake, cyclone and landslides.

(12 Lecture)

(b) Environmental Management

- From Unsustainable to sustainable development.
- Urban problems related to energy.
- Water conservation, rain water harvesting, watershed management.
- Resettlement and rehabilitation of people, its problems and concerns.
- Environmental ethics: Issues and possible solutions.
- Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust.
- Wasteland reclamation
- Environment protection Act: Issues involved in enforcement of environmental legislation.
- Role of Information Technology in Environment and Human Health.

UNIT- IV

General background and historical perspective- Historical development and concept of Human Rights, Meaning and definition of Human Rights, Kind and Classification of Human Rights. Protection of Human Rights under the UNO Charter, protection of Human Rights under the Universal Declaration of Human Rights, 1948. Convention on the Elimination of all forms of Discrimination against women. Convention on the Rights of the Child, 1989.

UNIT- V

Impact of Human Rights norms in India, Human Rights under the Constitution of India, Fundamental Rights under the Constitution of India, Directive Principles of State policy under the Constitution of India, Enforcement of Human Rights in India. Protection of Human Rights under the Human Rights Act, 1993- National Human Rights Commission, State Human Rights Commission and Human Rights court in India. Fundamental Duties under the Constitution of India.

Reference/ Books Recommended

1. SK Kapoor- Human rights under International Law and Indian Law.
2. HO Agrawal- Internation Law and Human Rights
3. एस.के. कपूर – मानव अधिकार
4. जे.एन. पान्डेय – भारत का संविधान
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6. J.N.Pandey - Constitutional Law of India
7. Agarwal K.C. 2001 Environmental Biology, Nidi pub. Ltd. Bikaner
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25. Townsend C. Harper J. And Michael Begon, Essentials of Ecology, Blackwell Science(TB)
26. Trivedi R.K.Handbook of Environment Laws, Rules, Guidelines, Compliances and Standards, Vol land II, Environment Media(R)
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28. Wanger K.D.1998, Environmental Management. W.B. Saunders Co. Philadelphia, USA 499

बी.ए./ बी.एस-सी./ बी.कॉम./ बी.एच.एस.सी. भाग -एक

(आधार पाठ्यक्रम)

प्रथम प्रश्नपत्र

हिंदी भाषा

कोड....

पूर्णांक 75

क्रेडिट 05

पाठ्यक्रमका उद्देश्य:-

- 1.हिंदी भाषाके प्रयोजनात्मक स्वरूप का सामान्य ज्ञान प्रदान करना।
- 2.कंप्यूटर में हिंदी भाषा के प्रयोग की आवश्यकता के अनुरूप कंप्यूटर की कार्य प्रणाली की आरंभिक जानकारी से अवगत होने के लिए प्रेरित करना।
- 3.हिंदी व्याकरण की बुनियादी ज्ञान संप्रेषण कौशल तथा भाषायी दक्षता से अवगत कराना।
- 4.साहित्य और समाज को समझने की दिशा में रुझान उत्पन्न करना।

पाठ्य विषय:-

इकाई 1. (क) पल्लवन, पत्राचार, अनुवाद (ख) एक टोकरी भर मिट्टी : माधवराव सप्रे बड़े भाई साहब : प्रेमचंद	अंक 15 18 कालखंड
इकाई 2. (क) संक्षेपण, हिंदी में संक्षिप्तकरण, हिंदी-अपठित गद्यांश, पारिभाषिक शब्दावली, हिंदी में पदनाम, मुहावरे एवंलोकोक्तियाँ (ख) जागो फिर एक बार: सूर्यकांत त्रिपाठी 'निराला' जन्मदिन ('मिट्टी से कहूँगाधन्यवाद' संग्रह से):एकांत श्रीवास्तव	अंक 15 18 कालखंड
इकाई 3. (क) शब्द-शुद्धि, वाक्य-शुद्धि, शब्द-ज्ञान- पर्यायवाची शब्द, विलोम शब्द, अनेकार्थी-शब्द, समश्रुत शब्द, अनेक शब्दों के लिए एक शब्द (ख) भोलाराम का जीव : हरिशंकर परसाई जीप पर सवार इल्लियां: शरद जोशी	अंक 15 18 कालखंड
इकाई 4.(क) मानक भाषा का अर्थ, मानक हिंदी भाषाका अर्थ, स्वरूप,	अंक 15

2/2
23.02.2023

2/2
23/2/23

2/2
23/2/23

2/2
23.2.2023

2/2
23/2/23

विशेषताएँ, मानक, उपभानक, अमानक-भाषा (ख)शिकागो से स्वामी विवेकानंद का पत्र सत्य और अहिंसा : महात्मा गांधी	18 कालखंड
इकाई 5. (क) देवनागरी लिपि- नामकरण, स्वरूप, विशेषताएँ, कंप्यूटर का सामान्य परिचय, कंप्यूटर में हिंदी का अनुप्रयोग। (ख)कछुआ-धरम : चन्द्रधर शर्मा 'गुलेरी' छत्तीसगढ़ का वैभव: हीरालाल शुक्ल	अंक 15 18 कालखंड

मूल्यांकन योजना:-

प्रत्येक इकाई से एक-एक प्रश्न पूछे जाएंगे। एक प्रश्न के 15 अंक होंगे। प्रत्येक प्रश्न में आंतरिक विकल्प होगा। प्रत्येक प्रश्न के दो भाग 'क' और 'ख' होंगे एवं अंक क्रमशः 08 एवं 07 होंगे। प्रश्नपत्र का पूर्णांक 75 निर्धारित है।

प्रश्नपत्रके पूर्णांक का दस प्रतिशत अंक आंतरिक मूल्यांकन के लिए निर्धारित है।

पाठ्यक्रम अधिगम परिणाम:-

इस पाठ्यक्रम को पूर्ण करने के पश्चात विद्यार्थी:-

1. हिंदी प्रयोजनात्मक तथा कार्यशील भाषा के प्रति सजग होंगे।
2. भाषा संबंधी संभावित अशुद्धियों एवं उनके परिष्कार से परिचित होंगे तथा मानक भाषा का व्यवहार करने में सक्षम होंगे।
3. विद्यार्थियों के शब्द भंडार में वृद्धि होगी।
4. हिंदी साहित्य के पठन-पाठन के प्रति रुचि जागृत होगी एवं सामाजिक महत्व के विविध आयामों को समझने की दृष्टि विकसित होगी।

पाठ्यक्रम निर्माण का औचित्य:-

2/2
23.2.23
23/2/23
23.2.2023

23/2/23

BA/B.Sc./B.Com/B.Sc. Home.Sc. (Part-I)
Foundation Course Paper-II English Language

Max. Marks:75
Total credits: 05

Qualifying Marks:26

Paper-II	Mark's	Period's	Credit
Unit-I Flamingo : A Textbook for college students Publication : Macmillan Publishers	3x5=15	18	01
Unit -II <ul style="list-style-type: none"> • Writing Skill • Describing a place or a person. • Writing a Biographical Sketch • Narrating an event or experience 	1x10=10	18	01
Unit -III Reading Comprehension <ul style="list-style-type: none"> • (a) Unseen Passage (Normal) • (b) Vocabulary (Text-based) 	1x5=05 1x10=10	18	01
Unit -III Reading Comprehension (a) Unseen Passage (Normal) (b) Vocabulary (Text-based)	1x5=5 1x5=5	09	0.5
Unit-V Grammar <ul style="list-style-type: none"> • Articles • Gerunds /Participles • Subject Verb Agreement • Use of Conjunctions • Tenses • Relatives • Possessives & self forms • Grammatical items given in Textbook 'Flaminso' 	1x25=25	27	1.5
Total	75	90	05
Recommended Books- 1. Essential English Grammar, 2nd Edition by Raymond Murphy, Cambridge Publication 2. English Grammar in use 5th edition by Raymond Murphy, Cambridge Publication. 3. Advanced English Grammar by Martine Hewings Cambridge University Press.			

Dr. Sushama Mishra

2/6/23
(P. Chandra)

BA/B.Sc./B.Com/B.Sc. Home.Sc. (Part-I)
Foundation Course Paper-II English Language

Max. Marks:75
 Total credits: 05

Qualifying Marks:26

Paper-II	Mark's	Period's	Credit
Unit-I Flamingo : A Textbook for college students Publication : Macmillan Publishers	3x5=15	18	01
Unit -II <ul style="list-style-type: none"> • Writing Skill • Describing a place or a person. • Writing a Biographical Sketch • Narrating an event or experience 	1x10=10	18	01
Unit -III Reading Comprehension <ul style="list-style-type: none"> • (a) Unseen Passage (Normal) • (b) Vocabulary (Text-based) 	1x5=05 1x10=10	18	01
Unit -III Reading Comprehension (a) Unseen Passage (Normal) (b) Vocabulary (Text-based)	1x5=5 1x5=5	09	0.5
Unit-V Grammar <ul style="list-style-type: none"> • Articles • Gerunds /Participles • Subject Verb Agreement • Use of Conjunctions • Tenses • Relatives • Possessives & self forms • Grammatical items given in Textbook 'Flaminso' 	1x25=25	27	1.5
Total	75	90	05
Recommended Books- 1. Essential English Grammar, 2nd Edition by Raymond Murphy, Cambridge Publication 2. English Grammar in use 5th edition by Raymond Murphy, Cambridge Publication. 3. Advanced English Grammar by Martine Hewings Cambridge University Press.			

Dr. Suzhama Mishra

2/6/23
(P. Choudhary)

Part A: Introduction			
Program:: Certificate Course		Class:: B.Sc. Home Science I Year	Year:: 2022 Session::2022:2023
1	Course Code	HSC-1T	
2	Course Title	Basic Nutrition	
3	Course Type	Theory	
4	Pre-requisite (if any)	NO	
5	Course Learning Outcomes (CLO)	At the end of this course, the students will be enable to: <ul style="list-style-type: none"> • To understand basic Knowledge of foods and nutrition. • To understand basic Knowledge of physiological role of nutrients. • To understand basic Knowledge of structure of nutrients. • To understand basic Knowledge of food groups. • To understand basic Knowledge of locally available foods. 	
6	Credit Value	Theory:4	
7	Total Marks	Max. Marks: 60 + 15	Min Passing Marks : 25

Part B: Content of the Course		
Total Periods: 60		
Unit	Topics	NO. of Periods
I	Concept of Nutrition: Good Nutrition, Under and Over Nutrition, Health, Functions of Food, Methods of Cooking: Traditional and modern Methods of cooking.	12
II	Nutrients: Macro nutrients: Classification, sources, functions Recommended Dietary Allowances, Carbohydrates Fats, Protein Fiber.	12
III	Nutrients: Micro nutrients ,Calcium Iron ,Zinc ,Iodine ,Fat soluble vitamins (A,D,E,K) ,Water soluble Vitamins (Thiamine, Riboflavin, Niacin, Vitamin C, Pyridoxine, Folic Acid and vitamin B12).	12
IV	Food, Structure: Composition, Classification and Functions, Cereals, Millets Pulses, Legumes, Fruits and Vegetables, Milk and Milk Products, Eggs.	12
V	Locally available foods: to combat Malnutrition, anemia, vitamin deficiencies, Ready to eat nutritious foods, Low cost nutritious recipes and their Calculation of nutritive value and cost.	12
Keywords:: Foods and Nutrition , Macro and micro nutrients, food groups, structure and composition, Methods of improving, Nutritional quality of food.		

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Part C: Learning Resources

Text Books, Reference Books, Other Resources

Suggested Readings:

1. आहार एवं पोषण . डॉ अरुणा पाल्टा, 3rd Edition, Shiva Prakashan.
2. आहार एवं पोषण . डॉ वृन्दा सिंह, 1st Edition, Panchsheel Prakashan.
3. Normal and therapeutic Nutrition : Robinson, C.H., Lawler, M.R. Chenoweth, W.L. and Garwick'A.E, 17th Edition, Macmillan Publishing Co.
4. Essentials of Food and Nutrition VI : Fundamentals Aspects VII: Applied Aspects.: Swaminathan, M.S., 2018 Edition, The Bangalore Press Publisher.
5. Introductory Foods: Hughes, O.Behnion, M. 5th Edition MacMillan Company.
6. Nutrition and Diet Therapy : Williams, S.R., 4th Edition, C.V. Mosby Publishing Company.
7. Food Science : B. Shrilaxmi, 7th Edition, New Age International Publisher.
8. Nutrition and Diet Therapy: Sue Rodwell Williams, 6th Edition, Times Mirror/Mosby College Publishing.
9. Foods, Facts and Principles: N Shakuntala Manay, M Shadabaksharaswamy, 3rd Edition Published by New Age International Publisher.
10. Food Science and Application in Indian Cookery : Usha Chandrasekhar, 2002 Edition, Phoenix Publishing House P. Ltd..
11. Basic Food Preparation: A Complete Manual: Raina U, Kashyap S, Narula V, Thomas S Suvira, Vir S, Chopra S, 4th Edition, Orient Black Swan Ltd, Mumbai.
12. Text Book of Human Nutrition: Mahtab, S. Bamji, Kamala Krishnasamy, Brahmam G.N.V 3rd Edition, Oxford and IBH Publishing Co. P. Ltd..
13. Food Science and Nutrition : Sunetra Roday , 4th Edition, Oxford University Press.
14. Indian Food Composition Tables: Longvah, T, Ananthan, R., Bhaskarachary, K., Venkaiah, K, 2017 Edition, (IFCT), Indian Council of Medical Research, National Institute of Nutrition, Hyderabad.

E- learning Resources:

1. Basic Nutrition
 - <https://youtube.com/watch?v=oaQyiVdeluEandfeature=share>
 - <https://youtu.be/GgUEkRBPPT0>
 - <https://youtu.be/a:pXxDrIVjk>
 - <https://youtu.be/4IMhVISEcxA>
 - <https://youtu.be/4iDi7fjSAGE>
 - <https://youtu.be/o6sljGdo7po>
 - <https://youtu.be/FMZNmgmwXag>
2. Concept of Nutrition
 - <https://www.youtube.com/watch?v=HtEPzK1RkFg>
 - Macro Nutrient
 - <https://www.mdanderson.org/publications/focused:on:health/what:are:macronutrients:h15:1593780.html#:~:text=Carbohydrates%2C%20fat%20and%20protein%20are,Anderson%20Wellness%20Dietitian%20Lindsey%20Wohlford.>
 - Nutrient
 - <https://en.wikipedia.org/wiki/Nutrient#:~:text=A%20nutrient>

3. Food Structure

<https://www.sciencedirect.com/journal/food:structure>

4. Locally Available Food

<https://www.google.com/search?q=Localy+Avaliabe+Foodandog=Localy+Avaliabe+Foodandaqs=c hrome..69i57j0i1314j0i15i22i30j0i22i30j0i15i22i30j0i22i30i2.4818j0j9andsourceid=chromeandie=UTF:8>

Part D : Assessment and Evaluation

Suggested Continuous Evaluation Methods:

Maximum Marks: 75

Continuous Comprehensive Evaluation (CCE): 15 Marks

University Exam (UE): 60 Marks

Internal Assessment:

Continuous Comprehensive
Evaluation (CCE)

Class Test
Assignment/Presentation

Two Test each of 15
Assignment Marks: 15
(Mean of Two Tests + Assignment
Divided by 2)

Part A: Introduction			
Program:: Certificate Course		Class:: B.Sc. Home Science I year	Year:: 2022
		Session:: 2022:2023	
1	Course Code	HSC-1P	
2	Course Title	LAB1: Basic Nutrition	
3	Course Type	Practical	
4	Pre-requisite (if any)	Theoretical Knowledge of various nutrients, their functions and sources.	
5	Course Learning Outcomes (CLO)	<p>At the end of this course, the students will be enable to:</p> <ul style="list-style-type: none"> • To understand Knowledge of weights and measurements for foods related with intake and cooking. • To create basic Knowledge of any specific nutrient rich/deficient recipe. • To create specific nutrient dense recipe to combat local deficiency diseases. • To understand Basic Knowledge of locally available food grains in recipes. • To develop traditional Indian and Chhattisgarhi recipes. 	
6	Credit Value	Practical : 2	
7	Total Marks	Max. Marks: 25	Min Passing Marks : 09

Part B: Content of the Course	
Total NO. of Periods :15	
Tentative Practical List	<p>Note: This is tentative list; the teacher concern can add more Experiment as per Requirement.</p> <ol style="list-style-type: none"> 1. Weights and Measures standard and household measures for raw and cooked food. 2. Preparation of two low cost nutritious recipes. 3. Cooking Methods : Chhattisgarhi traditional recipes, sweet and salty. 4. Protein rich, Iron and calcium rich –locally available low cost recipe of Ragi, leafy vegetables, millets, Kodo, Kutki. 5. Preparation of ready to eat nutritious Products. 6. Three day workshop for low cost nutritious recipe. 7. Work shop on Indian and Chhattisgarhi Traditional recipes. 8. Visit to Gadh Kaleva or Chhattisgarhi restaurants. 9. Project/ Field work: Identification and data collection of nutrition based diseases in community (sample 200/ group of 6 students).

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Part C: Learning Resources

Text Books, Reference Books, Other Resources

Suggested Readings:

1. आहार एवं पोषण दक डॉ अरुणा पाल्टा, 3rd Edition, Shiva Prakashan.
2. आहार एवं पोषण दक डॉ वृन्दा सिंह, 3rd Edition, Panchsheel Prakashan.
3. Normal and therapeutic Nutrition : Robinson, C.H., Lawler, M.R. CheNOWeth, W.L and Garwick A.E, 17th Edition, Macmillan Publishing Co.
4. Essentials of Food and Nutrition VI : Fundamentals Aspects VII: Applied Aspects.: Swaminathan, M.S., 2018 Edition, The Bangloare Press Publisher.
5. Introductory Foods: Hughes, O.Behnion, M. 5th Edition MacMillan Company.
6. Nutrition and Diet Therapy : Williams, S.R., 4th Edition, C.V. Mosby Publishing Company.
7. Food Science : B. Shrilaxmi, 7th Edition, New Age International Publisher.
8. Nutrition and Diet Therapy: Sue Rodwell Williams, 6th Edition, Times Mirror/Mosby College Publishing.
9. Foods, Facts and Principles: N Shakuntala Manay, M Shadabaksharaswamy, 3rd Edition Published by New Age International Publisher.
10. Food Science and Application in Indian Cookery : Usha Chandrasekhar, 2002 Edition, Phoenix Publishing House P. Ltd..
11. Basic Food Preparation: A Complete Manual: Raina U, Kashyap S, Narula V, Thomas S Suvira, Vir. S. Chopra S, 4th Edition, Orient Black Swan Ltd, Mumbai.
12. Text Book of Human Nutrition: Mahtab, S. Bamji, Kamala Krishnasamy, Brahman G.N.V 3rd Edition, Oxford and IBH Publishing Co. P. Ltd..
13. Food Science and Nutrition : Sunetra Roday , 4th Edition, Oxford University Press.
14. Indian Food Composition Tables: Longvah, T, Ananthan, R., Bhaskarachary, K., Venkaiah, K, 2017 Edition, (IFCT), Indian Council of Medical Research, National Institute of Nutrition, Hyderabad.

E: learning Resources:

1. Basic Nutrition
 - <https://youtube.com/watch?v=oaQyiVdeluEandfeature=share>
 - <https://youtu.be/a:pXxDrlVjk>
 - <https://youtu.be/4IMhVISEcxA>
 - <https://youtu.be/4iDi7fjSAGE>
 - <https://youtu.be/o6s1jGdo7po>
 - <https://youtu.be/FMZNmgmWxag>
2. Low Cost Nutrient
<https://www.google.com/search?q=low+cost+nutritious+foodanddq=Low+Cost+Nutrientandaqs=crome.3.69i57j0i512i2j0i390i4.7425j1j9andsourceid=chromeandie=UTF:8>
3. Ready to Eat
<https://www.google.com/search?q=ready+to+eat+nutrientanddq=ready+to+eat+nutrientandaqs=chrome..69i57j0i10i15i22i30j0i22i30j0i390i3.6039j0j9andsourceid=chromeandie=UTF:8>
4. Chhattisgarhi Dish
<https://www.google.com/search?q=Chhatishgarhi+Dishanddq=Chhatishgarhi+Dishandaqs=chrome..69i57j0i13i3j0i13i30i2j0i5i13i30j0i8i10i13i30j0i8i10i13i15i30j0i390.4095j0j7andsourceid=chr>

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Part D : Assessment and Evaluation

Suggested Continuous Evaluation Methods:

Maximum Marks: 25

Continuous Comprehensive Evaluation(CCE): Not Applicable

University Exam (UE): 25

Internal Assessment:

Continuous Comprehensive
Evaluation (CCE)

Class Test
Assignment/Presentation

Not Applicable



आज दिनांक 31.05.2022 को केन्द्रीय अध्ययन मण्डल की मीटिंग गृहविज्ञान विभाग में आयोजित की गई जिसमें निम्नलिखित सदस्य उपस्थित हुए तथा विभिन्न गृहविज्ञान से संबंधित विषयों के पाठ्यक्रम संशोधित एवं अनुमोदित किये गये-

डॉ. सीमा मिश्रा, शासकीय बिलासा कन्या महाविद्यालय, बिलासपुर	- अध्यक्ष,
डॉ. बबीता दुबे	- प्रतिनिधि, उच्च शिक्षा विभाग, नया रायपुर
डॉ. भारती सेठी, डॉ. खूबचंद बघेल शासकीय स्नातकोत्तर महाविद्यालय, गिलाई-3, दुर्ग	- सदस्य
डॉ. संध्या वर्मा, शासकीय कला एवं वाणिज्य महावि. देवेन्द्र नगर, रायपुर	- सदस्य
डॉ. संध्या मदन मोहन, प्राचार्य, गिलाई महिला महाविद्यालय, गिलाई, एवं अध्यक्ष, अध्ययन मण्डल, हेमचंद यादव विश्वविद्यालय	- सदस्य
डॉ. रश्मि मिंज, दूधाधारी महिला महावि. रायपुर	- सदस्य
डॉ. अल्का दुग्गल, वामन राव पाटनकर महिला महावि. दुर्ग	- सदस्य
डॉ. निशा श्रीवास्तव, होलीकास महिला महावि. अंबिकापुर	- सदस्य
डॉ. शिप्रा बनर्जी, दूधाधारी महिला महावि. रायपुर	- सदस्य
श्रीमती ममता आर, देव, शासकीय कमलादेवी राठी महिला स्नातको. महावि. राजनांदगांव छ.ग.	- सदस्य
सुश्री सुषमा घई, शासकीय बिलासा कन्या महाविद्यालय, बिलासपुर	- सदस्य
डॉ. दीपाली राव, शासकीय घनश्याम सिंह गुप्त स्नातको. महावि, बालोद	- सदस्य
डॉ. अर्चना दीक्षित, शासकीय बिलासा कन्या महाविद्यालय, बिलासपुर	- सदस्य
डॉ. शोभा महिरवर, शासकीय माता शबरी महावि. बिलासपुर	- सदस्य

डॉ. वर्मा डोडिया, विषय विशेषज्ञ तथा शेष अन्य सदस्य ऑन लाइन उपस्थित रहे.



Part A: Introduction			
Program: Certificate Course		Class: B.Sc. Home Science I Year	Year: 2022 Session:2022:2023
1	Course Code	HSC- 2T	
2	Course Title	Introduction To Resource Management	
3	Course Type	Theory	
4	Pre-requisite(if any)	NO	
5	Course Learning Outcomes (CLO)	At the end of this course, the students will be enable to: <ul style="list-style-type: none"> • To understand Importance of proper Management. • To understand Factors Important for management. • To understand Decision Making Process. • To understand Management of time, energy and finance. • To understand Work simplification. • To understand Management of available resources. 	
6	Credit Value	Theory: 4	
7	Total Marks	Max. Marks: 60+15	Min Passing Marks : 25

Part B: Content of the Course		
Total Periods: 60		
Unit	Topics	NO. of Periods
I	Introduction to Resource Management: Definitions Types of Management, Advantages of Management Limitation in Management.	12
II	Factors Motivating Management: Goals: Definition, Types and Utility, Values: Importance, Sources, Classification, Characteristics, and Changing values. Standards: Conventional and Non Conventional: qualitative, quantitative, conventional and Non conventional, Relation between values, goods and standard.	12
III	Resource: Types of Resources, Characteristics of Resource, Factors affecting use of resources, Relation to Resources to Management Decision making: Definitions and Importance, Steps of Decision, Factors affecting decision Resolving conflicts.	12
IV	Management Process: Meaning Definition and element of Management process: Planning, Controlling, Organizing and evaluation, Planning: Importance, Techniques and Types Organization, Controlling: Phases of Controlling, Factory in success of the control steps: suitability, promptness, New decisions, Flexibility, Supervision: Types of Supervision: Direction and Guidance, Evaluation: Importance, Types, Techniques of Self evaluation, Evaluation of whole process and management.	12

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V	<p>Management of Resources: Time Management: Tools: Time patterns, Time Cost, Peak Load, Work Curve, Rest Period, Time Norm, Energy Management, Introduction, Type, Causes, Symptoms, of fatigue Measures to Relives.</p> <p>Process of energy management: Work Simplification Definition Importance, Techniques Formal and informal pen and pencil techniques.</p> <p>Time Management: Tools, Time patterns, Time Cost, Peak Load, Work Curve, Rest Period, and Time Norm.</p> <p>Energy Management: Introduction, Type, Causes, Symptoms, of fatigue Measures to Relives, Process of energy management, Work Simplification Definition Importance, Techniques – Formal and informal pen and pencil techniques.</p>	12
<p>Keywords: Resource Management, goals, values and standers decision making, management process.</p>		

Part C: Learning Resources		
Text Books, Reference Books, Other Resources		
<p>Suggested Readings:</p> <ol style="list-style-type: none"> 1. Family resource management: Brinda Singh, 3rd Edition, Panchsheel Prakashan. 2. Family resource management – Premavathy Seetharaman, Sonia Batra, Preeti Mehra, 6th Edition, CBS Publication. 3. Family resource management: Tami James Moore, Sylvia M.Asay, 4th Edition, SAGE Publishing. 4. Foundation of Family resource management: Elizabeth B Goldsmith, 6th Edition, SAGE Publishing. 5. गृहव्यवस्था एवं गृहसज्जांदक रीना खनूजा, 4th Edition, Bookman Publisher, 6. Management of Modern Families: Inma,N.,Gross, Elizabeth Crandall, Manjori m. Knoll 2nd Edition Appleton Century Crofts Publisher. 7. Home Management: Varghese, MA, Srinivasan, Kogale, NN, 2nd Edition, New Age International Publisher. 8. Management for modern families: Gross, Cranall and Kholi, 3rd Edition, Princticee Hall Inc. 9. Management in Family living: Nickell and Dorsey, J, 4th Edition, Wiley Eastern Limited. 10. Family Resource Management and Interior Decoration : Bhargava, B, 4th Edition, Jaipur: Apple Printer and V. R. Printers 11. Home Management: Contexts and Concepts : Deacon, R. F., and Firebaugh, F.M. 7th Edition, Boston: Houghton Mifflin Company. <p>E-learning Resources:</p> <ol style="list-style-type: none"> 1. Management Process https://www.youtube.com/results?search_query=management+process 2. Energy Management https://www.youtube.com/results?search_query=process+of+energy+management+in+hindi 		
Part D: Assessment and Evaluation		
<p>Suggested Continuous Evaluation Methods: Maximum Marks: 75 Continuous Comprehensive Evaluation(CCE): 15 Marks University Exam (UE): 60 Marks</p>		
Internal Assessment : Continuous Comprehensive Evaluation (CCE)	Class Test Assignment/Presentation	Two Test each of 15 Assignments Marks: 15 (Mean of Two Tests + Assignment Divided by 2)

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Part A: Introduction			
Program: Certificate Course		Class: B.Sc. Home Science I Year	Year: 2022 Session:2022;2023
1	Course Code	HSC-2P	
2	Course Title	LAB2: Introduction to Resource Management	
3	Course Type	Practical	
4	Pre-requisite(if any)	Theoretical Knowledge of procedure of basic management Process.	
5	Course Learning Outcomes (CLO)	<p>At the end of this course, the students will be enable to:</p> <ul style="list-style-type: none"> • To understand Importance of Precise Management. • To understand Goal setting in life. • To understand Decision Making Process. • To understand Management of time, energy and finance. • To understand Work simplification technique. 	
6	Credit Value	Practical: 2	
7	Total Marks	Max. Marks: 25	Min Passing Marks : 09

Part B: Content of the Course	
Total NO. of Periods: 15	
Tentative Practical List	<p>Note: This is tentative list; the teacher concern can add more Experiment as per Requirement.</p> <ol style="list-style-type: none"> 1. Identify and formulate various types of standards that student can have. 2. Identify and formulate five goals that a student will have. 3. Identify and formulate various types of decision, write process of decision making. 4. To work out minimum and maximum working approach. (Vertical and Horizontal). 5. To develop simplify methods for any work. 6. Visit to energy garden. 7. Project/ Field Work: Take up a situation trip/function/picnic/party and manage that situation. Write the process of management implementing and report. Making time plan for a student (at least for a week) and explain it.

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Part C: Learning Resources

Text Books, Reference Books, Other Resources

Suggested Readings:

1. Family resource management: Brinda Singh, 3rd Edition, Panchsheel Prakashan.
2. Family resource management – Premavathy Seetharaman, Sonia Batra, Preeti Mehra, 6th Edition, CBS Publication.
3. Family resource management: Tami James Moore, Sylvia M.A Ray, 4th Edition, SAGE Publishing.
4. Foundation of Family resource management: Elizabeth B Goldsmith, 6th Edition, SAGE Publishing.
5. गृहव्यवस्था एवं गृहसज्जा. रीना खनूजा, 4th Edition, Bookman Publisher.
6. Management of Modern Families: Inma, N.,Gross, Elizabeth Crandall, Manjori m. KNOll 2nd Edition Appleton Century Crofts Publisher.
7. Home Management: Varghese, M.A, Srinivasan, Kogale, N.N, 2nd Edition, New Age International Publisher.
8. Management for modern families: Gross, Cranall and Kloli , 3rd Edition , Princticee Hall Inc.
9. Management in Family living: Nickell and Dorsey, J , 4th Edition, Wiley Eastern Limited.
10. Family Resource Management and Interior Decoration : Bhargava, B, 4th Edition, Jaipur: Apple Printer and V. R. Printers
11. Home Management- Contexts and Concepts : Deacon, R. F., and Firebaugh, F.M. 7th Edition, Boston: Houghton Mifflin Company.

E: learning Resources:

1. Types of Standards

[https://www.google.com/search?q=various+types+of+standards&dq=Various+types+of+stan
dred](https://www.google.com/search?q=various+types+of+standards&dq=Various+types+of+stan+dred)

2. Types of Decision

https://www.youtube.com/results?search_query=type+of+decision+

Part D: Assessment and Evaluation

Suggested Continuous Evaluation Methods::

Maximum Marks: 25

Continuous Comprehensive Evaluation(CCE): Not applicable

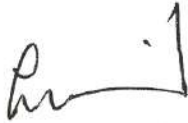
University Exam (UE): 25

Internal Assessment : Continuous Comprehensive Evaluation (CCE)	Class Test Assignment/Presentation	Not Applicable
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आज दिनांक 31.05.2022 को केन्द्रीय अध्ययन मण्डल की मीटिंग गृहविज्ञान विभाग में आयोजित की गई जिसमें निम्नलिखित सदस्य उपस्थित हुए तथा विभिन्न गृहविज्ञान से संबंधित विषयों के पाठ्यक्रम संशोधित एवं अनुमोदित किये गये-

डॉ. सीमा मिश्रा, शासकीय बिलासा कन्या महाविद्यालय, बिलासपुर	- अध्यक्ष,
डॉ. बबीता दुबे	- प्रतिनिधि, उच्च शिक्षा विभाग, नया रायपुर
डॉ. भारती सेठी, डॉ. खूबचंद बघेल शासकीय स्नातकोत्तर महाविद्यालय, गिलाई-3, दुर्ग	- सदस्य
डॉ. संध्या वर्मा, शासकीय कला एवं वाणिज्य महावि. देवेन्द्र नगर, रायपुर	- सदस्य
डॉ. संध्या मदन मोहन, प्राचार्य, गिलाई महिला महाविद्यालय, गिलाई, एवं अध्यक्ष, अध्ययन मण्डल, हेमचंद यादव विश्वविद्यालय	- सदस्य
डॉ. रश्मि मिंज, दूधाधारी महिला महावि. रायपुर	- सदस्य
डॉ. अल्का दुग्गल, वामन राव पाटनकर महिला महावि. दुर्ग	- सदस्य
डॉ. निशा श्रीवास्तव, होलीक्रास महिला महावि. अंबिकापुर	- सदस्य
डॉ. शिप्रा बनर्जी, दूधाधारी महिला महावि. रायपुर	- सदस्य
श्रीमती ममता आर. देव, शासकीय कमलादेवी राठी महिला स्नातको. महावि. राजनांदगांव छ.ग.	- सदस्य
सुश्री सुषमा घई, शासकीय बिलासा कन्या महाविद्यालय, बिलासपुर	- सदस्य
डॉ. दीपाली राव, शासकीय घनश्याम सिंह गुप्त स्नातको.महावि, बालोद	- सदस्य
डॉ. अर्चना दीक्षित, शासकीय बिलासा कन्या महाविद्यालय, बिलासपुर	- सदस्य
डॉ. शोभा महिस्वर, शासकीय माता शबरी महावि. बिलासपुर	- सदस्य

डॉ. वर्षा डोडिया, विषय विशेषज्ञ तथा शेष अन्य सदस्य ऑन लाइन उपस्थित रहे.



Part A: Introduction			
Program: Certificate Course		Class: B.Sc. Home Science I Year	Year: 2022 Session: 2022:2023
1	Course Code	HSC-3T	
2	Course Title	Introduction To Human Development	
3	Course Type	Theory	
4	Pre-requisite(if any)	NO	
5	Course Learning Outcomes (CLO)	At the end of this course, the students will be enable to: <ul style="list-style-type: none"> • To understand growth and development. • To understand Principals of development. • To understand Importance of heredity and environment. • To understand various aspects of development. • To understand Interventions for Families in Trouble. 	
6	Credit Value	Theory: 4	
7	Total Marks	Max. Marks: 60+15	Min Passing Marks : 25

Part B: Content of the Course		
Total Periods: 60		
Unit	Topics	NO. of Periods
I	<p>An overview on the field of HD: Definition of development, ie. Family and society, variations across cultures and individual differences in human development, family and child welfare. A family welfare programme, Child welfare program.</p> <p>Growth and Development: Understanding growth and development (Definitions), General Principles of development, Constraints and facilitators in growth and development (influences of heredity and environment).</p> <p>Genetic Inheritance: (i) fertilization (ii) Number of chromosomes. (iii) Genotype and phenotype, (iv) sex linked genetic effects.</p> <p>Environmental per-requisites: (i) Nutrition, (ii) opportunities, Interaction between environment and inheritance:</p> <p>(i) Genes provide the predisposition, range and direction of development,</p> <p>(ii) Environment determines the extent or limit.</p> <p>(iii) The beginning of a new life</p> <p>Prenatal development: Prenatal influences on the child: biological risks, age of mother, physical characteristics, illness, diet and nutrition, stress and emotional strains environmental hazards.</p>	12
II	<p>Physical Development: The new born physical appearance: size, weight, bodily proportions, sensory capacities i.e. hearing, vision, taste, smell, touch, temperature and position, Changes in size, shape, muscles and bones, and brain as it continues through : infancy, end of infancy, Linking physical and motor development.</p>	12

Signature

	<p>Motor development: reflexes in infancy; major milestones through end of infancy, Physical and motor development can be influenced through (i) Maturation, (ii) nutrition, (iii) monitoring and healthcare, (iv) stimulation, (v) practice.</p>	
III	<p>Cognitive Development across the Life Span: Cognitive development: The concept of intelligence and Mental age, IQ (A brief introduction to Piaget's theory) introduce stages without much elaboration: sensor motor stage in infancy, concrete operational stage in childhood changes in remembering the reasoning in middle childhood, formal operations in adolescence, fluid and crystallized intelligence in adulthood, declining cognitive abilities in late adulthood and old age.</p> <p>The Development of Language across the Life Span: Language as a form of communication: Functions of language: expressing wishes, controlling others, interacting with others, expressing individuality, exploring the world, pretending, using language to communicate/share information, understanding our society and culture, reasoning.</p> <p>Communicating before language development i.e. the stages of vocalization: undifferentiated crying differentiated crying, babbling, Imitation of sound, patterned speech, Beginning to use language: one or two word utterances; early sentences; telegraphic speech; understanding metaphors, smiles, irony, reflecting on superficial and deeperlevel meanings of sentences.</p> <p>Uses of language; conversational acts (Non-verbal) conversational conventions, learning to listen, Language development can be influenced through: (i) Maturation (ii) Stimulation.</p> <p>Deviations in language development: in language development: Possible decline of language in the aged, (speech: impairment and disorders to be introduced briefly).</p>	12

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IV	<p>Socio-emotional Development Across the Life Span: Understanding social and emotional development.</p> <p>Social development: Introduce socialization as an important part of the process of becoming human. Social milestones: beginning with the emergence of the social smile; attachment, separation, anxiety, acquiring sex roles in childhood, induction into occupational roles by adulthood, social isolation and consequences in late adulthood and in the elderly.</p> <p>Patterns and role of parent: child interactions, interactions with siblings and peers; social and cultural interactions through infancy to old age.</p> <p>Emotional development: Emotions serve two adaptive functions: (i) motivating and (ii) communication.</p> <p>Basic emotional reactions (joy, fear, jealousy, anger, sadness, aggressiveness).</p> <p>Components of emotion: (i) emotions are elicited by the context, (ii) include bodily activity, (iii) emotional expressions are made through facial expressions, bodily-movements, vocalization, (iv) labeling emotions.</p> <p>Emotions may be acquired as a result of/by the Influence of (I) internal and external sources, (ii) cognition, (iii) learning and (iv) social reinforcement.</p> <p>Milestones of emotional development through infancy and childhood emotional confusions and adolescence, stability of emotions in adulthood and old age, Emotional problems: (i) depression, (ii) over-activity, (iii) aggression.</p> <p>Personality Development across the Life Span: Personality Development, Components of personality, Factors affecting Personality: (a) heredity, (b) environment (parenting styles, peer groups, social interactions, early childhood experiences, life events, support available in a community etc.) Deviant personalities: (Juvenile delinquency in childhood and anti-social personalities in adulthood).</p>	12
V	<p>Marriage: Marriage as an institution: goals, rituals, functions, changes and challenges, Mate selection: factors influencing, considerations of exogamy and endogamy, changing trends, arranged and personal choice of mates., Preparation for marriage, social emotional issues, financial concerns and exchanges, guidance and counseling, Marital adjustment, areas and factors influencing: Planned Parenthood.</p> <p>Families with Problems: Families in distress, violence and abuse, dowry victimization, violence against women.</p> <p>Interventions for Families in Trouble: Counseling pre marital and marital Programmes and policies of CG Govt. for children and families</p>	12

and their evaluation.

Keywords: Development, growth, heredity, environment, physical development, motor Development, Language development, cognitive development.

Part C: Learning Resources

Text Books, Reference Books, Other Resources

Suggested Readings:

1. Human Development: Brinda Singh, 3rd Edition, Panchsheel Prakashan.
2. बाल विकास रामबाबू गुप्त, 2nd Edition, ViNOd Pustak Mandir.
3. बाल मनोविज्ञान एवं बाल विकास and डॉ डी एन श्रीवास्तव, डॉ प्रीति वर्मा, 2020 Edition, ViNOd Pustak Mandir.
4. Handbook of Child Psychology : Mussen (Ed.) Vol. 1, New York; Scientific American Books.
5. Human Development: Gordon, I. J. 2nd Edition, New York : Harper and Row Publication.
6. Human Development and Family Studies in India : Saraswathi T.S. and Kaur, B 2nd Edition, Sage Publications.
7. Child Development: Elizabeth B. Hurlock, 5th Edition, MC Graw Hill Education India.
8. Text book of Human Development (A Life Span Development Approach) : Dr. S. Shrivastava, Dr. K. Sudharani, 2016 Edition, S. Chand and Company.
9. Strategies for Human Development: Dr. Samar Deb, 2017 Edition, Kalpaz Publication.
10. Child Development: Elizabeth B. Hurlock, 6th Edition, MC Graw Hill Education India.
11. Child Psychology and Development: S.K. Mangal and Shubhara Mangal, 2019 Edition, Sterling Publisher.

E-learning Resources:

1. Growth and Development
https://www.youtube.com/results?search_query=Growth+and+Development
2. Genetic Inheritance
https://www.youtube.com/results?search_query=genetic+inheritance
3. Prenatal Development
<https://www.google.com/search?q=prenatal+development>
4. Physical Development
<https://www.google.com/search?q=physical+development>
5. Motor Development
<https://www.google.com/search?q=motor+development>

Part D: Assessment and Evaluation

Suggested Continuous Evaluation Methods::

Maximum Marks: 75

Continuous Comprehensive Evaluation(CCE): 15 Marks

University Examination(UJE): 60 Marks

Internal Assessment :

Continuous Comprehensive Evaluation (CCE)

Class Test
Assignment/Presentation

Two Test each of 15
Assignments Marks: 15
(Mean of Two Tests +
Assignment Divided by 2)

Part A: Introduction			
Program: Certificate Course		Class: B.Sc. Home Science I Year	Year: 2022 Session: 2022:2023
1	Course Code	HSC-3P	
2	Course Title	LAB3: Introduction to Human Development	
3	Course Type	Practical	
4	Pre-requisite (if any)	Theoretical Knowledge of Physical and mental development and Contributory Factors.	
5	Course Learning Outcomes (CLO)	<p>At the end of this course, the students will be enable to:</p> <ul style="list-style-type: none"> • To understand Physical growth and development of human child. • To compare Normal children with delinquent child. • To understand Importance of heredity and environment on development. • To develop skills of counseling to parents. • To study cognitive development across the life span. 	
6	Credit Value	Practical: 2	
7	Total Marks	Max. Marks: 25	Min Passing Marks : 09

Part B: Content of the Course	
Total No. of Periods: 15	
Tentative Practical List	<p>Note: This is tentative list; the teacher concern can add more Experiment as per Requirement.</p> <ol style="list-style-type: none"> 1. Visit to a pediatric ward to observe a new born baby and a premature baby. 2. Preparing a growth average height weight chart of five (5) children from one to (1 :3) years. 3. Study of immunization schedule. 4. Survey of parent's regulative awareness about weaning food, toys; clothes. 5. Prepare a development (Physical / Motor) Milestone chart. 6. Role play for pre marital counseling. 7. Project/ Field work: Prepare report of activities and facilities at Anganvadi / Nursery school.

Part C: Learning Resources	
Text Books. Reference Books, Other Resources	
Suggested Readings:	
<ol style="list-style-type: none"> 1. Human Development: Brinda Singh, 3rd Edition, Panchsheel Prakashan. 2. बाल विकासं रामबाबू गुप्त, 2nd Edition, Vinod Pustak Mandir. 3. बाल मनोविज्ञान एवं बाल विकासं डॉ डी एन श्रीवास्तव, डॉ प्रीति वर्मा, 2020 Edition, Vinod Pustak Mandir. 4. Handbook of Child Psychology : Mussen (Ed.) Vol. 1, New York; Scientific American Books. 	

Pr

5. Human Development: Gordon, I.J.- 2nd Edition, New York : Harper and Row.
6. Human Development and Family Studies in India: Saraswathi T.S. and Kaur, B 2nd Edition, Sage Publications.
7. Child Development: Elizabeth B. Hurlock, 5th Edition, MC Graw Hill Education India.
8. Text book of Human Development (A Life Span Development Approach) : Dr. S. Shrivastava, Dr. K. Sudharani, 2016 Edition, S. Chand and Company.
9. Strategies for Human Development: Dr. Samar Deb, 2017 Edition, Kalpaz Publication.
10. Child Development: Elizabeth B. Hurlock, 6th Edition, MC Graw Hill Education India.
11. Child Psychology and Development: S.K. Mangal and Shubhara Mangal, 2019 Edition, Sterling Publisher.

E- learning Resources:

1. Marital Counseling
<https://www.google.com/search?q=marital+counseling&ei=8OeeYqWjCtj0:Qa8qD4and&oeq=M marital+Counselingand>
2. Anganvadi
https://www.google.com/search?q=anganwadi&ei=Y:ieYqvGHJ_w4:EP4qe:IAand&oeq=Angan vadiand
Details of Human Development
3. <https://www.coursera.org/learn/learning-knowledge-human-development>
Human Development essential for nation-
4. <https://www.shiftelearning.com/blog/bid/146487/eLearning-the-key-to-developing-human-capital>

Part D: Assessment and Evaluation

Suggested Continuous Evaluation Methods::

Maximum Marks: 25

Continuous Comprehensive Evaluation(CCE): Not applicable

University Exam (UE): 25

Internal Assessment :

Continuous Comprehensive Evaluation (CCE)

Class Test
Assignment/Presentation


Not Applicable



आज दिनांक 31.05.2022 को केन्द्रीय अध्ययन मण्डल की मीटिंग गृहविज्ञान विभाग में आयोजित की गई जिसमें निम्नलिखित सदस्य उपस्थित हुए तथा विभिन्न गृहविज्ञान से संबंधित विषयों के पाठ्यक्रम संशोधित एवं अनुमोदित किये गये-

डॉ. सीमा मिश्रा, शासकीय बिलासा कन्या महाविद्यालय, बिलासपुर	- अध्यक्ष,
डॉ. बबीता दुवे	- प्रतिनिधि, उच्च शिक्षा विभाग, नया रायपुर
डॉ. भारती सेठी, डॉ. खूबचंद बघेल शासकीय स्नातकोत्तर महाविद्यालय, मिलार्ड-3, दुर्ग	- सदस्य
डॉ. संध्या वर्मा, शासकीय कला एवं वाणिज्य महावि. देवेन्द्र नगर, रायपुर	- सदस्य
डॉ. संध्या मदन मोहन, प्राचार्य, मिलार्ड महिला महाविद्यालय, मिलार्ड, एवं अध्यक्ष, अध्ययन मण्डल, हेमचंद यादव विश्वविद्यालय	- सदस्य
डॉ. रश्मि मिंज, दूधघारी महिला महावि. रायपुर	- सदस्य
डॉ. अल्का दुग्गल, वामन राय पाटनकर महिला महावि, दुर्ग	- सदस्य
डॉ. निशा श्रीवास्तव, होलीकास महिला महावि. अबिकापुर	- सदस्य
डॉ. शिप्रा बनर्जी, दूधघारी महिला महावि. रायपुर	- सदस्य
श्रीमती ममता आर. देव, शासकीय कमलादेवी राठी महिला स्नातको. महावि. राजनांदगांव छ.ग.	- सदस्य
सुश्री सुषमा घई, शासकीय बिलासा कन्या महाविद्यालय, बिलासपुर	- सदस्य
डॉ. दीपाली राव, शासकीय घनश्याम सिंह गुप्त स्नातको. महावि, बालोद	- सदस्य
डॉ. अर्चना दीक्षित, शासकीय बिलासा कन्या महाविद्यालय, बिलासपुर	- सदस्य
डॉ. शोभा महिस्वर, शासकीय माता शबरी महावि. बिलासपुर	- सदस्य

डॉ. वर्षा डोडिया, विषय विशेषज्ञ तथा शेष अन्य सदस्य अंगन लाइन उपस्थित रहे.



Program: Certificate Course		Class: B.Sc. Home Science I Year	Year: 2022	Session: 2022:2023
1	Course Code	HSC- 4T		
2	Course Title	Textile And Clothing		
3	Course Type	Theory		
4	Pre-requisite(if any)	NO		
5	Course Learning Outcomes (CLO)	At the end of this course, the students will be enable to: <ol style="list-style-type: none"> 1. To understand chemistry of textile fibers. 2. To understand Yarn and fabric making process. 3. To understand variety of wifes and weaving process. 4. To understand various finishes and their uses. 5. To understand Dyeing and printing in detail. 		
6	Credit Value	Theory: 4		
7	Total Marks	Max. Marks: 60+15	Min Passing Marks : 25	

Part B: Content of the Course		
Total Periods: 60		
Unit	Topics	NO. of Periods
I	Introduction of the Subject: Common Terminologies used in Textile, Properties of Textile Fibers, Classification of the textile fibers: History, composition, types, production and properties, Natural Fiber – Cotton, Linen, Silk, Wool, Man-Made Fiber – Rayon, Thermoplastic Fiber – Nylon.	12
II	Study of Yarn: Meaning, Yarn Making : Mechanical and Chemical Types – Simple, Complex, Novelty and Textured yarn number, yarn count ,Yarn Twist, Methods of fabric construction, Weaving: Handloom and its parts, Different types of weaves: Plain weaves, Floating weaves, Pile, Jacquard and Leno weaves, Other methods of fabric construction : Felting, Knitting, Crocheting, Braiding and Lacing.	12
III	Finishes: Meaning and purpose, Physical finishes: Singeing, Napping, Brushing, Shearing, sizing, shrinking, Tendering, Calendaring etc, Chemical finishes: Bleaching and mercerizing, Special purpose finishes: wrinkle resistance, water resistant and water repellent, Flame retardant, crease resistance, soil resistant etc, Identification of Fabric, Appearance test / Microscopic test, Burning test / Creasing test, Breaking test / Tearing test and Chemical test, Importance of Clothing.	12
IV	Dyes: Definition and Classification, Suitability of various dyes to different fibers, Dyeing methods of different stages of processing: Fiber, yarn, piece, union and cross, Household method of dyeing, Colour fastness, Characteristics of colour fastness, Fastness to sunlight, crocking, perspiration.	12

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V	Printing : Its significance , Methods of printing : Block, Stencil, Screen and Roller printing, Advantages and disadvantages of various methods of printing, Faults in different printing methods, Preparation of printing paste, Preparation of cloth for printing, After treatment of printed goods, Resist dyed : Bandhej of Gujarat and Rajasthan, Batik.	12
Keywords:: Textile fibers natural and synthetics, yarn making fabric construction wavering, Finishes, dyeing, printing.		

Part C: Learning Resources

Text Books. Reference Books, Other Resources

Suggested Readings:

1. वस्त्र विज्ञान एवं परिधान का परिचय : डॉ मंजु पाटनी, 2022 Edition, Star Publication.
2. Textile Science: an explanation of fiber properties: Gohl, E., Vile sky, L., 2 edition, New Age International Publishing.
3. वस्त्र विज्ञान एवं परिधान का परिचय : डॉ बी के बख्शी , 2nd Edition, ViNOD Pustak Mandir.
4. वस्त्र विज्ञान - बृन्दा सिंह, 19th Edition, Panchsheel Publication.
5. तंतु एवं वस्त्र विज्ञान : डॉ शिप्रा बैनर्जी, 2018, Chhattisgarh Hindi Granth Academy publisher.
6. Fundamentals of Textiles and their care : Sushsila Dhantyagi, 5th Edition, Orient Black Swan.
7. Textile testing and analysis: Collier, B.J., and Epps, H.H. 1998 Edition, Prentice Hall Publishers.

E: Learning Resources:

1. Study of Yarn
<https://www.google.com/search?q=Study+of+Yarnand>
2. Finishes
<https://www.google.com/search?q=finishesand>
3. Dyes
https://www.youtube.com/results?search_query=Dyes
4. Printing
https://www.youtube.com/results?search_query=Printing

Part D: Assessment and Evaluation

Suggested Continuous Evaluation Methods::

Maximum Marks: 75

Continuous Comprehensive Evaluation(CCE): 15

University Exam (UE): 60

Internal Assessment:

Continuous Comprehensive Evaluation (CCE)

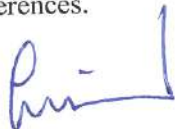
Class Test
Assignment/Presentation

Two Test each of 15
Assignment Marks: 15
(Mean of Two Tests +
Assignment Divided by 2)



Part A: Introduction			
Program: Certificate Course		Class: B.Sc. Home Science I Year	Year: 2022 Session: 2022:2023
1	Course Code	HSC-4P	
2	Course Title	LAB4: Textile and Clothing	
3	Course Type	Practical	
4	Pre-requisite(if any)	Theoretical Knowledge of various textile fibers and technology of cloth construction.	
5	Course Learning Outcomes (CLO)	<p>At the end of this course, the students will be enable to:</p> <ul style="list-style-type: none"> • To understand various tests for identification of textile fibers. • To develop skill in printing and dyeing techniques. • To understand making of weaves and their uses. • To understand microscopic structure and chemistry of fibers. • To learn removal of different types of stain. 	
6	Credit Value	Practical: 2	
7	Total Marks	Max. Marks: 25	Min Passing Marks : 09

Part B: Content of the Course	
Total No. of Periods: 15	
Tentative Practical List	<p>Note: This is tentative list; the teacher concern can add more Experiment as per Requirement.</p> <ol style="list-style-type: none"> 1. Identification of textile fibers: <ul style="list-style-type: none"> • Visual test / Microscopic test • Burning test /Chemical test 2. Weaves and their variations: <ul style="list-style-type: none"> • Plain weave / Twill weave • Satin and Sateen weave • Honeycomb and Birdseye weave 3. Handloom center visit 4. 07 days workshop on Tie and dye 5. 07 days workshop on Batik 6.07 day's workshop on painting : <ul style="list-style-type: none"> • Introduction to learning look at the visual Arts. • Composition • Space • Form • Tone • Color • Subject matter • Drawing and it 'purposes • Looking at print 7. One week workshop on Printing techniques: Block, Screen, Stencil and Spray . 8. Printing preferences.



Part C: Learning Resources

Text Books, Reference Books, Other Resources

Suggested Readings:

1. वस्त्र विज्ञान एवं परिधान का परिचय : डॉ मंजु पाटनी, 2022 Edition, Star Publication.
2. Textile Science: an explanation of fiber properties: Gohl, E., Vile sky, L, 2 edition, New Age International Publishing.
3. वस्त्र विज्ञान एवं परिधान का परिचय : डॉ बी के बख्शी , 2nd Edition, ViNOd Pustak Mandir.
4. वस्त्र विज्ञान - बृन्दा सिंह, 19th Edition, Panchsheel Publication.
5. तंतु एवं वस्त्र विज्ञान : डॉ शिप्रा बैनर्जी, 2018, Chhattisgarh Hindi Granth Academy publisher.
6. Fundamentals of Textiles and their care : Sushila Dhantyagi, 5th Edition, Orient Black Swan.
7. Textile testing and analysis: Collier, B.J., and Epps, H.H. 1998 Edition, Prentice Hall Publishers.

E: Learning Resources:

1. Tie and Dye-
https://www.youtube.com/results?search_query=Tie+%26+Die
2. Painting-
https://www.youtube.com/results?search_query=Painting
Details of Courses in Textiles-
3. <https://www.classcentral.com/subject/textiles>
Software for textile designing
4. <https://www.researchgate.net/publication/359312787> E.

Part D: Assessment and Evaluation

Suggested Continuous Evaluation Methods::

Maximum Marks: 25

Continuous Comprehensive Evaluation(CCE): Not applicable

University Exam (UE): 25

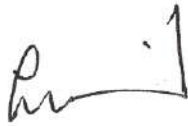
Internal Assessment :	Class Test	Not Applicable
Continuous Comprehensive Evaluation (CCE)	Assignment/Presentation	

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आज दिनांक 31.05.2022 को केन्द्रीय अध्ययन मण्डल की मीटिंग गृहविज्ञान विभाग में आयोजित की गई जिसमें निम्नलिखित सदस्य उपस्थित हुए तथा विभिन्न गृहविज्ञान से संबंधित विषयों के पाठ्यक्रम संशोधित एवं अनुमोदित किये गये-

डॉ. सीमा मिश्रा, शासकीय बिलासा कन्या महाविद्यालय, बिलासपुर	- अध्यक्ष,
डॉ. बबीता दुबे	- प्रतिनिधि, उच्च शिक्षा विभाग, नया रायपुर
डॉ. भारती सेठी, डॉ. खूबचंद बघेल शासकीय स्नातकोत्तर महाविद्यालय, भिलाई-3, दुर्ग	- सदस्य
डॉ. संध्या वर्मा, शासकीय कला एवं वाणिज्य महावि. देवेन्द्र नगर, रायपुर	- सदस्य
डॉ. संध्या मदन मोहन, प्राचार्य, भिलाई महिला महाविद्यालय, भिलाई, एवं अध्यक्ष, अध्ययन मण्डल, हेमचंद यादव विश्वविद्यालय	- सदस्य
डॉ. रश्मि मिंज, दूधधारी महिला महावि. रायपुर	- सदस्य
डॉ. अल्का दुग्गल, वामन राय पाटनकर महिला महावि, दुर्ग	- सदस्य
डॉ. निशा श्रीवास्तव, होलीकास महिला महावि. अर्विकापुर	- सदस्य
डॉ. शिप्रा बनर्जी, दूधधारी महिला महावि. रायपुर	- सदस्य
श्रीमती ममता आर, देव, शासकीय कमलादेवी राठी महिला स्नातको. महावि. राजनांदगांव छ.ग.	- सदस्य
सुश्री सुषमा घई, शासकीय बिलासा कन्या महाविद्यालय, बिलासपुर	- सदस्य
डॉ. दीपाली राव, शासकीय घनश्याम सिंह गुप्त स्नातको.महावि, बालोद	- सदस्य
डॉ. अर्चना दीक्षित, शासकीय बिलासा कन्या महाविद्यालय, बिलासपुर	- सदस्य
डॉ. शोभा महिस्वर, शासकीय माता शबरी महावि. बिलासपुर	- सदस्य

डॉ. वर्षा डोडिया, विषय विशेषज्ञ तथा शेष अन्य सदस्य अग्न लाइन
उपस्थित रहे.



Part A: Introduction			
Program: Certificate Course		Class: B.Sc. Home Science I Year	Year: 2022 Session: 2022:2023
1	Course Code	HSC-5T	
2	Course Title	Community Development	
3	Course Type	Theory	
4	Pre-requisite(if any)	NO	
5	Course Learning Outcomes (CLO)	At the end of this course, the students will be enable to: <ul style="list-style-type: none"> • To understand developmental approaches. • To understand community development in India. • To understand support structure and their functions. • To understand developmental programs at various stages. • To understand analysis of social satisfaction. 	
6	Credit Value	Theory: 4	
7	Total Marks	Max. Marks: 60+15	Min Passing Marks : 25

Part B: Content of the Course		
Total Periods: 60		
Unit	Topics	NO. of Periods
I	Development: Definitions, types: large scale and centrally planned and small scale and locally planned, Community Development in India, Evolution of community development programs in India since Independence. Historical Perspective of development approaches: The Capitalistic approaches. The Welfare approach, The Gandhian approach, The Modernization approach, The Institutional and social justice approach.	12
II	Support structures and their Functions: Central Social Welfare Board, State Social Welfare Board, National Level Voluntary Agencies such as CAPART, KVIC, Elected Panchayats, Community Development Program Approaches: Multi-purpose, Target group, Growth centered. Home Science and Community Development: Scope of Home Science Extension for meaningful participation in community development in India.	12
III	Analysis of Social Relations of Groups Social Stratification: Caste System (Micro/Macro): Differential ranking of groups as superior and inferior caste-groups; changes that have taken place/expected; abolition of un-touch ability, inter-caste collaboration, fusion of sub-castes; impact of reservations; social inequalities – extent of Acceptance or opposition, Role of audio visual aids in community development.	12

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IV	Poverty Analysis: (Micro/Macro) causes of poverty and The number and proportion of poor (in general and with reference to gender in particular), health facilities, clothing and housing facilities, education facilities. Unemployment pattern and indebtedness; causes of poverty and inequalities; programs for poverty alleviation. Poverty line.	12
V	Analysis of Social Relation to Environment (Micro/Macro): Customs, mores, rules, regulations that are eco-friendly and that are Not eco-friendly, Approaches and methods of socio-economic analysis: Rapid rural appraisal, Participatory rural appraisal, Survey, Case studies, observation, Participant observation	12
Keywords: Gandhian and capitalistic approach, Support structures, Approaches for community development, Cast systems (Micro and Macro), Poverty analysis.		

Part C: Learning Resources

Text Books. Reference Books, Other Resources

Suggested Readings:

1. An introduction to community development – Yashwant G. Mahajan 1st Edition, Current Publication.
2. Community organization and development – an Indian perspective: Asha Ramagonda Patil, 1st Edition, PHI Learning.
3. Community organization and social work: Sheeba Joshep, Vishnu Das, 2016 Edition, Discovery Publishing.
4. A Development Communication: Uma Narula, Revised Edition, Haranand Publication.
5. Classes in India Today : Desrochers, John 1984 Editions, Centre for Social Action.
6. Culture, Religion and Development: Dietrich, Gabriele 1978 Edition, Centre for Social Action.
7. A Study of Rural EcoNOmics: Systems Approach, Desai, Vasant 1990 Edition, Himalaya Publishing House.
8. Cognitions learning course NO: 25 SWAYAM Portal based course.
9. Information and Communication techNOlogy: Dr. Aprajita Bhatt SWAYAM portal course based.

E: Learning Resources:

1. Poverty Analysis
https://www.youtube.com/results?search_query=Poverty+Analysis
2. Community Development –Basic details
<https://www.elearninglearning.com/community/>
3. Course details of Community Development
https://www.researchgate.net/publication/229439447_Online_learning_communities_and_community_development
4. Policies for Community Development-
<https://alison.com/course/introduction-to-community-development-revised>

Part D: Assessment and Evaluation

Suggested Continuous Evaluation Methods:

Maximum Marks: 75

Continuous Comprehensive Evaluation(CCE): 15

University Exam (UE): 60

Internal Assessment: Continuous Comprehensive Evaluation (CCE)	Class Test Assignment/Presentation	Two Test each of 15 Assignment Marks: 15 (Mean of Two Tests + Assignment Divided by 2)
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Part A: Introduction			
Program: Certificate Course		Class: B.Sc. Home Science I Year	Year: 2022 Session: 2022:2023
1	Course Code	HSC-5P	
2	Course Title	LAB5: Community Development	
3	Course Type	Practical	
4	Pre-requisite (if any)	Theoretical Knowledge of concept of community development and various supporting policies.	
5	Course Learning Outcomes (CLO)	At the end of this course, the students will be able to: <ul style="list-style-type: none"> • To understand developmental approaches for Indian community. • To develop skill regarding community survey and analysis. • To develop skill regarding impactful community dialogs. • To understand demonstration technique for community. • To organize group activities for community. 	
6	Credit Value	Practical: 2	
7	Total Marks	Max. Marks: 25	Min Passing Marks : 09

Part B: Content of the Course	
Total No of Periods : 15	
Tentative Practical List	<p>Note: This is tentative list; the teacher concern can add more Experiment as per Requirement.</p> <p>Field Experience in Villagers / Urban Slums</p> <ol style="list-style-type: none"> a. Practical use of RRA / PRA Methods b. Reporting on Socio-economic analysis of the rural / urban community c. To select, Plan, preparation and use of different-audio visual aids. i.e. Chart: Educational, Tree Chart, Flow. d. Chart, Suspense Chart. e. Posters, Cartoons, Pamphlets, Puppets. f. Project/ Field Work: Organic farming reuse of waste material, paper bags making, use of eco Friendly material. g. Organizing group. h. Demonstration

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Part C: Learning Resources

Text Books, Reference Books, Other Resources

Suggested Readings:

1. An Introduction To Community Development : Yashwant G. Mahajan 1st Edition, Current Publication.
2. Community organization and development –an Indian perspective: Asha Ramagonda Patil, 1st Edition, PHI Learning.
3. Community organization and social work: Sheeba Joshep, Vishnu Das, 2016 Edition, Discovery Publishing.
4. Development Communication: Uma Narula, Revised Edition, Haranand Publication.
5. Classes in India Today : Desrochers, John 1984 Editions, Centre for Social Action.
6. Culture, Religion and Development: Dietrich, Gabriele 1978 Edition, Centre for Social Action.
7. A Study of Rural Economics - Systems Approach: Desai, Vasant 1990 Edition, Himalaya Publishing House.
8. Cognitions learning course NO: 25 SWAYAM Portal based course.
9. Information and Communication technology: Dr. Aprajita Bhatt SWAYAM portal course based.

E: Learning Resources

1. Flow Chart
https://www.youtube.com/results?search_query=process+flow+chart
2. Poster, Pamplate, Cartoon
https://www.youtube.com/results?search_query=Poster%2C+Cartoon+and+pamplate
3. Community Development –Basic details
<https://www.elearninglearning.com/community/>
4. Course details of Community Development
https://www.researchgate.net/publication/229439447_Online_learning_communities_and_community_development
5. Policies for Community Development-
<https://alison.com/course/introduction-to-community-development-revised>

Part D: Assessment and Evaluation

Suggested Continuous Evaluation Methods::

Maximum Marks: 25

Continuous Comprehensive Evaluation(CCE): Not applicable

University Exam (UE): 25

Internal Assessment : Continuous Comprehensive Evaluation (CCE)	Class Test Assignment/Presentation	Not Applicable
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Part A: Introduction			
Program: Certificate Course		Class: B.Sc. Home Science I Year	Year: 2022 Session: 2022:2023
1	Course Code	HSC-6T	
2	Course Title	Personal Empowerment and Computer Basic	
3	Course Type	Theory	
4	Pre-requisite(if any)	NO	
5	Course Learning Outcomes (CLO)	At the end of this course, the students will be enable to: <ul style="list-style-type: none"> • To understand personal growth and development. • To understand Women empowerment. • To understand Home science as empowerment tool. • To understand Computer fundamentals. • To Understand Various Operating Systems. 	
6	Credit Value	Theory: 4	
7	Total Marks	Max. Marks: 60+15	Min Passing Marks : 25

Part B: Content of the Course		
Total Periods: 60		
Unit	Topics	No. of Periods
I	Personal Growth and Personality Development (Through exercises, role play, discussions): The challenge: understanding and managing oneself, being aware of one's strengths and weaknesses. Personality Development: Factors and influences: emotional and motivational aspects; assertion vs. aggression, Peer pressures: Issues and management; group conformity and individualism as co-existing aspects, Conflicts and stresses, simple coping strategies.	12
II	Empowerment of Women: Women and Development: The personal, familial, societal and national perspectives, Capacity building for women: Education, decision-making abilities and opportunities, awareness and information on legal and political issues, Women's organizations and collective strength: Women's action groups, women's participation in development initiatives.	12
III	Home Science Education as Empowerment: The interdisciplinary of Home Science Education, The role of Home Science Education for personal growth and professional development, Home Science as holistic education with integration of goals for persons, enhancement and community development.	12
IV	Some Significant Contemporary Issues of Concern: Gender issues: inequities and discriminations, biases and stereotypes; myths and facts, AIDS: Awareness and educations	12

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V	Computer Fundamentals: Overview about computers, Components of a computer, Input/output devices, Secondary storage devices, Representation of Data: Files, Records, Files, File organization and access, Introduction to Operating Systems.	12
Keywords: Personality development, Role play, Discussions, women empowerment, home science education, Fundamentals of computers.		

Part C: Learning Resources		
Text Books. Reference Books, Other Resources		
Suggested Readings:		
<ol style="list-style-type: none"> 1. Women resources and national development – Chandashekhar, Edition 5th, 2011, Printice Hall. 2. Career management- A new challenge: vol:1: Bhattacharya, Panchsheel Publisher. 3. India Youth: process of socialization: Gove M.S. 3rd Edition, Vishwa Yuva Kendra. 4. Computer fundamental: Pradeep K Sinha, 8th edition, BPB Publication. 5. Basic computer course: Changeriya, 3rd Edition, Chetan Prakashan. 6. Computer basic: Gourav Agrawal, 2nd Edition, Digital Munim ji. 7. Women's Resource and National Development : A Perspective, 1992 Edition, Gaurav Publishing House. 8. Fundamentals of To aching Home Science: Chandra A.A. Shah and U. Joshi, 1989 Edition, Sterling Publishers Pvt Ltd. 9. Understanding Psychology: Feldman, R. 1987 Edition, McGraw Hill Co. 10. SWAYAM portal course based Information and Communication technology: Dr. Aprajita Bhatt. 		
E:Learning Resource:		
<ol style="list-style-type: none"> 1. Women Empowerment https://www.youtube.com/results?search_query=women+empowerment 2. Empowerment Policies In India- https://www.googleadservices.com/pagead/aclk?sa=L&ai=DChcSEwivj5KFikj4AhVkmGYCHV5GCzAYA-BADGgJzbQ&ae=2&ohost=www.google.co.in&cid=CAASJeRoIWw93YwZziCOI5Uv_i6o- 3. Polices for Women- https://www.googleadservices.com/pagead/aclk?sa=L&ai=DChcSEwivj5KFikj4AhVkmGYCHV5GCzAYA-BACGgJzbQ&ae=2&ohost=www.google.co.in&cid=CAASJeRoIWw93YwZziCOI5Uv_i6o- Rights for women- 4. https://www.female-rights.com/e-learning-platform/ 		
Part D: Assessment and Evaluation		
Suggested Continuous Evaluation Methods::		
Maximum Marks: 75		
Continuous Comprehensive Evaluation(CCE): 15		
University Exam (UE): 60		
Internal Assessment: Continuous Comprehensive Evaluation (CCE)	Class Test Assignment/Presentation	Two Test each of 15 Assignment Marks: 15 (Mean of Two Tests + Assignment Divided by 2)

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Part A: Introduction			
Program: Certificate Course		Class: B.Sc. Home Science I Year	Year: 2022 Session: 2022:2023
1	Course Code	HSC-6P	
2	Course Title	LAB 6: Personal Empowerment and Computer Basic	
3	Course Type	Practical	
4	Pre-requisite (if any)	Theoretical Knowledge of empowering anybody along with Knowledge of soft skills.	
5	Course Learning Outcomes (CLO)	<p>At the end of this course, the students will be enable to:</p> <ul style="list-style-type: none"> • To acquaints with Knowledge of structure of computer. • To understand functioning of computer with different operating systems. • To understand internet and its uses. • To explore MS Excel for calculations and graphical presentation. • To Understand Various Operating Systems with latest configuration. 	
6	Credit Value	Practical: 2	
7	Total Marks	Max. Marks: 25	Min Passing Marks : 09

Part B: Content of the Course	
Total No. of Periods: 15	
Tentative Practical List	<p>Note: This is tentative list; the teacher concern can add more Experiment as per Requirement.</p> <ol style="list-style-type: none"> 1. <ol style="list-style-type: none"> a. Introduction b. Exploring the Desktop c. Running multiple programs d. Accessories e. Control Panel f. Managing Documents and Folders 2. MS: Word <ol style="list-style-type: none"> a. Starting MS:WORD b. Creating and Formatting a document c. Changing Fonts and Point Size d. Table Creation and operations e. Autocorrect, Auto Text, Spell Check, Thesaurus f. Word Art, inserting objects g. Mail merge, letter, label, envelope h. Page set-up, Page preview i. Printing a document 3. MS: Excel <ol style="list-style-type: none"> a. Starting Excel b. Work Sheet, Cell, Inserting Data into Rows/Columns c. Alignment, Text-wrapping d. Sorting data, Auto sum

	<ul style="list-style-type: none"> e. Use of functions, referencing formula cells in other formulae f. Naming cells and ranges, Goal seek g. Generating graphs h. integrating Worksheet, data and charts with WORD i. Creating Hyperlink to a WORD document j. Page set-up, Print Preview, Printing Worksheets.
4	<p>Internet</p> <ul style="list-style-type: none"> a. Genesis and use of Internet b. Software and hardware equipments for Internet c. Accessing the Internet, Web Page, Using a Search Engine, Accessing the Internet from MS:Office applications
5 Project: Write on any relevant topic using computer skills: Graph and Calculation.	

Part C: Learning Resources

Text Books. Reference Books, Other Resources

Suggested Readings:

1. Women resources and national development – Chandashekhar, Edition 5th , 2011, Printice Hall.
2. Career Management-A new challenge: vol:1: Bhattacharya, Panchsheel Publisher.
3. India Youth: process of socialization: Gove M.S. 3rd Edition, Vishwa Yuva Kendra.
4. Computer fundamental: Pradeep K Sinha, 8th edition, BPB Publication.
5. Basic computer course: Changeriya, 3rd Edition, Chetan Prakashan.
6. Computer basic: Gourav Agrawal, 2nd Edition, Digital Munim ji.
7. Women's Resource and National Development: A Perspective, 1992 Edition, Gaurav Publishing House.
8. Fundamentals of Teaching Home Science : Chandra A.A. Shah and U. Joshi, 1989 Edition, Sterling Publishers Pvt Ltd.
9. Understanding Psychology: Feldman, R. 1987 Edition, Mc Graw Hill Co.
10. SWAYAM portal course based Information and Communication technology: Dr. Aprajita Bhatt.

E: Learning Resource:

1. MS Word
https://www.youtube.com/results?search_query=MS+Word
2. MS Excel
https://www.youtube.com/results?search_query=MS+Excel
3. Internet
https://www.youtube.com/results?search_query=Internet

Part D: Assessment and Evaluation

Suggested Continuous Evaluation Methods:

Maximum Marks: 25

Continuous Comprehensive Evaluation(CCE): Not applicable

University Exam (UE): 25

Internal Assessment : Continuous Comprehensive Evaluation (CCE)	Class Test Assignment/Presentation	Not Applicable
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आज दिनांक 31.05.2022 को केन्द्रीय अध्ययन मण्डल की मीटिंग गृहविज्ञान विभाग में आयोजित की गई जिसमें निम्नलिखित सदस्य उपस्थित हुए तथा विभिन्न गृहविज्ञान से संबंधित विषयों के पाठ्यक्रम संशोधित एवं अनुमोदित किये गये-

डॉ. सीमा मिश्रा, शासकीय बिलासा कन्या महाविद्यालय, बिलासपुर	- अध्यक्ष,
डॉ. बबीता दुबे	- प्रतिनिधि, उच्च शिक्षा विभाग, नया रायपुर
डॉ. भारती सेठी, डॉ. खूबचंद बघेल शासकीय स्नातकोत्तर महाविद्यालय, भिलाई-3, दुर्ग	- सदस्य
डॉ. संध्या वर्मा, शासकीय कला एवं वाणिज्य महावि. देवेन्द्र नगर, रायपुर	- सदस्य
डॉ. संध्या मदन मोहन, प्राचार्य, भिलाई महिला महाविद्यालय, भिलाई, एवं अध्यक्ष, अध्ययन मण्डल, हेमचंद यादव विश्वविद्यालय	- सदस्य
डॉ. रश्मि मिंज, दूधघाटी महिला महावि. रायपुर	- सदस्य
डॉ. अल्का दुग्गल, वामन राव पाटनकर महिला महावि, दुर्ग	- सदस्य
डॉ. निशा श्रीवास्तव, होलीकास महिला महावि. अंबिकापुर	- सदस्य
डॉ. शिप्रा बनर्जी, दूधघाटी महिला महावि. रायपुर	- सदस्य
श्रीमती ममता आर, देव, शासकीय कमलादेवी राठी महिला स्नातको. महावि. राजनांदगांव छ.ग.	- सदस्य
सुश्री सुषमा घई, शासकीय बिलासा कन्या महाविद्यालय, बिलासपुर	- सदस्य
डॉ. दीपाली राव, शासकीय घनश्याम सिंह गुप्त स्नातको. महावि, बालोद	- सदस्य
डॉ. अर्चना दीक्षित, शासकीय बिलासा कन्या महाविद्यालय, बिलासपुर	- सदस्य
डॉ. शोभा महिस्वर, शासकीय माता शबरी महावि. बिलासपुर	- सदस्य

डॉ. वर्षा डोडिया, विषय विशेषज्ञ तथा शेष अन्य सदस्य उक्त लाइन
उपस्थित रहे.



Part A: Introduction

Program: Certificate Course		Class: B.Sc. Clinical Nutrition I	Year: 2022	Session: 2022-2023
		Year		
1	Course Code	CN-IT		
2	Course Title	Anatomy and Physiology		
3	Course Type	Theory		
4	Pre-requisite (if any)	NO		
5	Course Learning Outcomes (CLO)	At the end of this course, the students will be enable to: <ul style="list-style-type: none"> • To understand Basics Knowledge of Human body structure. • To understand Basic knowledge of Human body functioning. • To understand Basic knowledge of Homeostasis. • To understand Basic knowledge of Genetical regulation. • To understand Basic knowledge of Nutrients. 		
6	Credit Value	Theory: 4		
7	Total Marks	Max. Marks: 60+15	Min Passing Marks : 25	

Part B: Content of the Course

Total Periods: 60

Unit	Topics	No. of Periods
I	Human Cell: structure, organelles and inclusions. Tissues: Epithelial, connective, Bone: structure and classification. Lymphatic System: Formation and composition of Lymph, Lymph glands and their Functions Lymph Node spleen structure and function, Circulation of Lymph, rate of Flow of lymph.	12
II	Blood and blood circulation: Blood composition: Plasma Proteins, RBA, WBC Platelets: chemistry and count , functions of blood, Blood clotting mechanism Intrinsic & Extrinsic clotting , Hemophilia, Heparin , factors affecting clotting, blood groups and Rh Factor. Blood vessel: artery, Vein, sinusoids, capillary: Fenestrated & Muscular . Blood pressure: pulse, systolic, diastolic, Measurement of blood pressure.	12
III	Respiratory system: Organs of respiration: Nose, Principal Bronchi, Bronchioles, lungs and Alveoli, Pulmonary Volumes .Mechanism of respiration. Inspiration and Expiration, Pressure changes, Muscles involved: Diaphragm, Costal Muscles, Chemical respiration, Tissue respiration: Carriage of Oxygen and carbon dioxide , Anoxia, Asphyxia. Nervous regulation of respiration: Control of rate and depth of respiration forrhythmic respiration.	12

IV	<p>Digestive Systems: Organs, structure, function: Teeth, tongue, salivary glands saliva composition and function esophagus, stomach small intestine: large intestine, Digestive secretions: Stomach Juice, Intestinal juice , pancreatic juice.</p> <p>Digestive Glands: Liver pancreas and gallbladder.</p>	12
V	<p>Muscular system: General account of the system: Types of muscles striated, non- striated, Skeletal, Visceral and cardiac: The band structure, The scarco-tubular structure, structure of myofibrils: Actin and myosin, Muscular contraction theory Intercalated Disc, Functions of muscular tissue.</p>	12
<p>Keywords: Human cell, Tissues, Blood, Respiratory system, Digestive system, Muscular system, Process Of contraction, Respiratory system, Nervous Regulation of Respiration.</p>		

Part C: Learning Resources

Text Books. Reference Books, Other Resources

Suggested Readings:

1. Concise Textbook of Physiology – Indu Khurana, Arushi Khurana , 3rd Edition, ELSEVIER .
2. Human Physiology- C.C. Chatterjee, 12th Edition, CBS Publisher.
3. Principles of Physiology- Debasis Pramanik, 6th Edition J. P, Brothers Medical Publishers.
4. Human Physiology In Nutshell - Dr. A. K. Jain, 5th Edition ,Arya Publications .
5. Human Anatomy and Physiology-Dr S H Rashid, 2nd Edition, SIA Publishers.
6. Text book of Human Physiology- H D Singh, 3rd Edition ,S Chand & Co. Ltd.
7. Textbook of medical physiology - Guyton A.C.-Hall. J.E, 9TH edition, Prism Books Pvt Ltd.
8. Wilson, Anatomy and physiology and health and illness, Edinburgh Churchill Livingstone Publication.
9. Applied Physiology-Samsun and Write, 13th Edition, OUP India Publisher.
10. Guyton A.C.-Hall. J.E. 1996- Textbook of medical physiology 9th edition prism books private limited .
11. Anatomy , physiology and health and illness -Wilson, 7th Edition , Edinburgh Churchill Livingstone Publication.
12. Textbook of medical physiology - Chatterjee C.C. 9th Edition, CBS Publication.
13. Essentials of Medical Physiology- Sembulingam, 8th Edition, J P Brothers Medical Publishers.

E- Learning Resources:

1. Anatomy
https://youtube.com/playlist?list=PLJoALJA_KMOBdYvn33_Jcblu5tNtCO_JD
2. physiology
https://youtube.com/playlist?list=PLJoALJA_KMOAFecsQxKpf03wbSkNoIUmh

Part D: Assessment and Evaluation

Suggested Continuous Evaluation Methods:-

Maximum Marks: 75

Continuous Comprehensive Evaluation(CCE): 15

University Exam (UE): 60

Internal Assessment: Continuous Comprehensive Evaluation (CCE)	Class Test Assignment/Presentation	Two Test each of 15 Total Marks: 15 (Mean of Two Tests + Assignment Divided by 2)
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आज दिनांक 31.05.2022 को केन्द्रीय अध्ययन मण्डल की मीटिंग गृहविज्ञान विभाग में आयोजित की गई जिसमें निम्नलिखित सदस्य उपस्थित हुए तथा विभिन्न गृहविज्ञान से संबंधित विषयों के पाठ्यक्रम संशोधित एवं अनुमोदित किये गये-

डॉ. सीमा मिश्रा, शासकीय बिलासा कन्या महाविद्यालय, बिलासपुर	- अध्यक्ष,
डॉ. बबीता दुबे	- प्रतिनिधि, उच्च शिक्षा विभाग, नया रायपुर
डॉ. भारती सेठी, डॉ. खूबचंद बघेल शासकीय स्नातकोत्तर महाविद्यालय, भिलाई-3, दुर्ग	- सदस्य
डॉ. संध्या वर्मा, शासकीय कला एवं वाणिज्य महावि. देवेन्द्र नगर, रायपुर	- सदस्य
डॉ. संध्या मदन मोहन, प्राचार्य, भिलाई महिला महाविद्यालय, भिलाई,	- सदस्य
एवं अध्यक्ष, अध्ययन मण्डल, हेमचंद यादव विश्वविद्यालय	
डॉ. रश्मि मिंज, दूधधारी महिला महावि. रायपुर	- सदस्य
डॉ. अल्का दुग्गल, वामन राव पाटनकर महिला महावि, दुर्ग	- सदस्य
डॉ. निशा श्रीवास्तव, होलीकास महिला महावि. अंबिकापुर	- सदस्य
डॉ. शिप्रा बनर्जी, दूधधारी महिला महावि. रायपुर	- सदस्य
श्रीमती ममता आर, देव, शासकीय कमलादेवी राठी महिला स्नातको. महावि. राजनांदगांव छ.ग.	- सदस्य
सुश्री सुषमा घई, शासकीय बिलासा कन्या महाविद्यालय, बिलासपुर	- सदस्य
डॉ. दीपाली राव, शासकीय घनश्याम सिंह गुप्त स्नातको. महावि, बालोद	- सदस्य
डॉ. अर्चना दीक्षित, शासकीय बिलासा कन्या महाविद्यालय, बिलासपुर	- सदस्य
डॉ. शोभा महिस्वर, शासकीय माता शबरी महावि. बिलासपुर	- सदस्य

डॉ. वर्षा डोडिया, विषय विशेषज्ञ तथा शेष अन्य सदस्य ऑन लाइन उपस्थित रहे.



Part A: Introduction			
Program: Certificate Course		Class: B.Sc. Clinical Nutrition I Year	Year: 2022 Session: 2022-2023
1	Course Code	CN-2T	
2	Course Title	Physiology and Basic Nutrition	
3	Course Type	Theory	
4	Pre-requisite(if any)	NO	
5	Course Learning Outcomes (CLO)	<p>At the end of this course, the students will be able to:</p> <ul style="list-style-type: none"> To understand Basics Knowledge of Various body system. To understand Basic knowledge of functioning of body system. To understand Basic knowledge of Importance of Nutrients for health. To understand Basic knowledge of chemistry of nutrients. To understand Basic knowledge of Deficiency diseases caused by absence of nutrients. 	
6	Credit Value	Theory: 4	
7	Total Marks	Max. Marks: 60+15	Min Passing Marks : 25

Part B: Content of the Course		
Total Periods: 60		
Unit	Topics	No. of Periods
I	<p>Excretory system: Organs structure and functions-Kidney, urethra nephron: Bowman's capsule, Urinary tubule: Filtration, selective absorption and secretion by nephrons, effective filtration pressure, Filtration pores, Urinary bladder, Formation of Urine, deposition and emptying of urinary bladder ,Composition of normal urine Abnormal Constituents of Urine .</p> <p>Skin structure and function: Dermis and Epidermis. Structure of sweat and sebaceous gland.Functions of skin and other sense organs:</p> <p>Eye: structure and functions Physiology of vision Defects in vision - myopia and hypermetropia.</p> <p>Ear structure and functions: External, middle and internal ear, Role of semi circular canals for body balancing. Mechanism of hearing.</p>	12
II	<p>Digestion and absorption: of Carbohydrates, Protein and Lipids. Principles of absorption.</p> <p>Role of Different digestive juices Digestion: in mouth, stomach, small intestine, Large intestine.</p> <p>Nervous system: Structure of a nerve cell, axon and dendrite, nerve fiber: myelinated and non myelinated.</p> <p>Central nervous system: Brain and spinal cord: Functions of different parts of the brain: Cerebrum, Cerebellum, Pons , Medulla Oblongata , Thalamus, Hypo-thalamus.</p>	12

	Thalamus, Hypo-thalamus. Nerve Impulse: synapse, synaptic transmission, neuro-transmitters, Reflex action, properties of reflex action.	
III	Reproductive system: Female reproductive organs structure and functions ovary fallopian tubes, uterus, vagina. Male Reproductive Organs: Structure and functions, Testis Vasdeferens, Urethra, Penis, prostate gland. Menstruation, puberty: Menopause Fertilization of ovum placenta its function, parturition.	12
IV	Carbohydrates: Composition, Classification: Monosaccharide, Disaccharides, Polysaccharides, Food Sources, Functions, Storage in Body Fats & Oils: Composition, Saturated and Unsaturated Fatty Acids ,Classification, simple and Complex fats, Essential Fatty Acids, Food Sources, Functions of Fats. Proteins: Composition, sources, classification, essential and nonessential amino acids. , Sources of Proteins, Functions, Amino Acid Pool, Negative and Positive Nitrogen Balance. Minerals: Functions, Sources, Bio availability and deficiency of Calcium, Iron, Iodine , Fluorine, Sodium, Potassium, Zinc.	12
V	Vitamins: Classification, Structure, Unit of Measurements, Sources, Functions and Daily requirements of Following Vitamins: Fat Soluble Vitamins: A,D,E,K. Water Soluble Vitamins: Ascorbic Acid, Thiamine, Riboflavin, Niacin , other Members of B Complex such as B6,Folic Acid and B ₁₂ . Effect of Deficiency and Excess of the following Nutrients Minerals: Calcium, Iron, Iodine, Fluorine, Sodium, Potassium, Zinc Vitamins: Fat and Water Soluble	12
Keywords: Kidney, effective filtration pressure, gloumerulus, hypothalamus, neuron, myelinsheath,synapse, synaptic transmission, digestive enzymes, Bio physical principals of digestion and absorption, Uterus, fallopian tube, spermatogenesis, various nutrients.		

Part C: Learning Resources

Text Books. Reference Books, Other Resources

Suggested Readings:

1. Anatomy and physiology for nurses- Evelyn pears 16th Edition, Faber & Faber.
2. Principles of Nutrition -Wilson EVAD, 4th ed. New York John Vilely& Sons.
3. Textbook of medical physiology -Guyton A.C.-Hall. J.E. 1996- 9th edition prism books private limited Bangalore.
4. Introductory Nutrition - Guthrie, Hele, Andrews,. 6th ed. St. Louis, Times Mirror Mosby College- 1988.
5. Advanced Textbook on Food and Nutrition -Swaminathan, M. (2012), , Vol. 1, Second Edition, Bangalore Printing and Publishing Co. Ltd.
6. SWAYAM portal course based Food and Nutrition course no- 40.

E-Learning Resource:

1. Excretory system
https://www.youtube.com/results?search_query=Excretory+system
2. Reproductive system
https://www.youtube.com/results?search_query=Reproductive+system
3. Nervous System
https://www.youtube.com/results?search_query=nervous+system

Part D: Assessment and Evaluation**Suggested Continuous Evaluation Methods:-**

Maximum Marks: 75

Continuous Comprehensive Evaluation(CCE): 15

University Exam (UE): 60

Internal Assessment : Continuous Comprehensive Evaluation (CCE)	Class Test Assignment/Presentation	Two Test each of 15 Total Marks: 15 (Mean of Two Tests + Assignment Divided by 2)
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Part A: Introduction			
Program: Certificate Course		Class: B.Sc. Clinical Nutrition I Year	Year: 2022 Session: 2022-2023
1	Course Code	CN-1P	
2	Course Title	LAB1: Physiology and Basic Nutrition	
3	Course Type	Practical	
4	Pre-requisite (if any)	Theoretical Knowledge of Human Anatomy & Physiology.	
5	Course Learning Outcomes (CLO)	<p>At the end of this course, the students will be enable to:</p> <ul style="list-style-type: none"> • To understand Blood Group & Rh factor. • To understand Basic Human Tissues. • To understand Hemoglobin level and Anemic. • To understand Basic knowledge of Blood Pressure & its regulation. • To understand Basic knowledge normal & abnormal constituents of urine. 	
6	Credit Value	Practical: 2	
7	Total Marks	Max. Marks: 50	Min Passing Marks : 17

Part B: Content of the Course	
Total No. of Periods: 30	
Tentative Practical List	<p>Note: This is tentative list; the teacher concern can add more Experiments as per Requirement.</p> <ol style="list-style-type: none"> 1. Types of Cells : Microscopic examination of prepared slides Epithelium – stratified Squamous, ciliated columnar, Glandular Connective tissue - Adipose, Bone , Areolar connective tissue Muscle - smooth, cardiac, stratified. 2. Blood Microscopic examination of prepared slides -Fresh amount of blood. Stained blood smear. Testing of blood groups using Anti- sera. Estimation of Coagulation time of blood by Capillary Glass tube method Estimation of bleeding time by using Filter paper spot method Hemoglobin estimation using haemocytometer. 3. Digestion : Identification Test Benedicts test for sugar, Barford test for Protein. Iodine test for starch. 4. Estimation of blood pressure by Auscultatory method. 5. Project- Study of Hemoglobin level of subjects belongs to different age groups (sample size-25/ 4 students).

Part C: Learning Resources

Text Books, Reference Books, Other Resources

Suggested Readings:

1. Concise Textbook of Physiology – Indu Khurana, Arushi Khurana, 3rd Edition, ELSEVIER.
2. Human Physiology- C.C. Chatterjee, 12th Edition, CBS Publisher.
3. Principles of Physiology- Debasis Pramanik, 6th Edition J. P, Brothers Medical Publishers.
4. Human Physiology In Nutshell - Dr. A. K. Jain, 5th Edition, Arya Publications.
5. Human Anatomy and Physiology-Dr S H Rashid, 2nd Edition, SIA Publishers.
6. Text book of Human Physiology- H D Singh, 3rd Edition, S Chand & Co. Ltd.
7. Textbook of medical physiology - Guyton A.C.-Hall. J.E, 9TH edition, Prism Books Pvt Ltd, Bangalore.
8. Wilson, Anatomy and physiology and health and illness, Edinburgh Churchill Livingstone Publication.
9. Applied Physiology-Samsun and Write, 13th Edition, OUP India Publisher.
10. Guyton A.C.-Hall. J.E. 1996- Textbook of medical physiology 9th edition prism books private limited Bangalore.
11. Anatomy, physiology and health and illness -Wilson, 7th Edition, Edinburgh Churchill Livingstone Publication.
12. Textbook of medical physiology -Chatterjee C.C. 9th Edition, CBS Publication.
13. Essentials of Medical Physiology-Sembulingam, 8th Edition, J P Brothers Medical Publishers.

E- Learning Resources-

1. Types of cell
https://www.youtube.com/results?search_query=types+of+cell
2. Blood
https://www.youtube.com/results?search_query=Blood
3. Barford test
https://www.youtube.com/results?search_query=barfoed+test

Part D: Assessment and Evaluation

Suggested Continuous Evaluation Methods:-

Maximum Marks: 50

Continuous Comprehensive Evaluation(CCE): Not Applicable

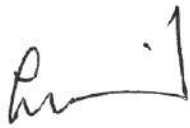
University Exam (UE): 50

Internal Assessment:	Class Test	Not Applicable
Continuous Comprehensive Evaluation (CCE)	Assignment/Presentation	

आज दिनांक 31.05.2022 को केन्द्रीय अध्ययन मण्डल की मीटिंग गृहविज्ञान विभाग में आयोजित की गई जिसमें निम्नलिखित सदस्य उपस्थित हुए तथा विभिन्न गृहविज्ञान से संबंधित विषयों के पाठ्यक्रम संशोधित एवं अनुमोदित किये गये-

डॉ. सीमा मिश्रा, शासकीय बिलासा कन्या महाविद्यालय, बिलासपुर	- अध्यक्ष,
डॉ. बबीता दुबे	- प्रतिनिधि, उच्च शिक्षा विभाग, नया रायपुर
डॉ. भारती सेठी, डॉ. खूबचंद बघेल शासकीय स्नातकोत्तर महाविद्यालय, गिलाई-3, दुर्ग	- सदस्य
डॉ. संध्या वर्मा, शासकीय कला एवं वाणिज्य महावि. देवेन्द्र नगर, रायपुर	- सदस्य
डॉ. संध्या मदन मोहन, प्राचार्य, गिलाई महिला महाविद्यालय, गिलाई, एवं अध्यक्ष, अध्ययन मण्डल, हेमचंद यादव विश्वविद्यालय	- सदस्य
डॉ. रश्मि मिंज, दूधाधारी महिला महावि. रायपुर	- सदस्य
डॉ. अल्का दुग्गल, वामन राव पाटनकर महिला महावि, दुर्ग	- सदस्य
डॉ. निशा श्रीवास्तव, होलीकास महिला महावि. अंबिकापुर	- सदस्य
डॉ. शिखा बनर्जी, दूधाधारी महिला महावि. रायपुर	- सदस्य
श्रीमती ममता आर, देव, शासकीय कमलादेवी राठी महिला स्नातको. महावि. राजनांदगांव छ.ग.	- सदस्य
सुश्री सुषमा घई, शासकीय बिलासा कन्या महाविद्यालय, बिलासपुर	- सदस्य
डॉ. दीपाली राय, शासकीय घनश्याम सिंह गुप्त स्नातको. महावि, बालोद	- सदस्य
डॉ. अर्चना दीक्षित, शासकीय बिलासा कन्या महाविद्यालय, बिलासपुर	- सदस्य
डॉ. शोभा महिस्वर, शासकीय माता शबरी महावि. बिलासपुर	- सदस्य

डॉ. वर्षा डोडिया, विषय विशेषज्ञ तथा शेष अन्य सदस्य अग्न लाइन
उपस्थित रहे.



Part A: Introduction			
Program: Certificate Course		Class: B.Sc. Food & Quality Control I Year	Year: 2022 Session: 2022-2023
1	Course Code	FQ-1T	
2	Course Title	Basic Nutrition & Food Chemistry	
3	Course Type	Theory	
4	Pre-requisite(if any)	NO	
5	Course Learning Outcomes (CLO)	At the end of this course, the students will be enable to: <ul style="list-style-type: none"> • To understand Basics Knowledge of foods and nutrition. • To understand Basic knowledge of Food Microbiology and Sanitation. • To understand Basic knowledge of Carbohydrate. • To understand Basic knowledge of Protein. • To understand Basic knowledge of Minerals. • To understand Basic knowledge of Enzymes. • To understand Basic knowledge of Vitamins. 	
6	Credit Value	Theory: 4	
7	Total Marks	Max. Marks: 60+15	Min Passing Marks : 25

Part B: Content of the Course		
Total Periods: 60		
Unit	Topics	No. of Periods
I	<p>Introduction to nutrition: food as a source of nutrients, function of foods, definition of nutrition, nutrients, adequate optimum and good nutrition, malnutrition, Inter-relationship between nutrition and health, visible symptoms of good health.</p> <p>Food guide: Basic five food groups how to use food guide, Use of food in body-digestion, absorption, transport utilization of nutrients in the body, Water as a nutrients, functions, sources, requirement, water, balance-effect of deficiency.</p>	12
II	<p>Carbohydrates: composition, classification, food sources, functions, Digestion, absorption, storage in body. Carbohydrates: reactions, functions of mono, oligo and Polly such in foods. Other sweetening agents Changes on cooking and processing.</p> <p>Fat and oils composition, saturated, unsaturated fatty acids, classification, food sources, functions of fats.</p> <p>Digestion absorption, Lipid: Nomenclature, classification, Physical properties, Chemical properties, Emulsion and emulsifiers, Chemistry on fat and oil.</p>	12

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III	<p>Proteins: composition, sources, essential, non essential amino acids sources of proteins, functions, protein deficiency (very brief). Amino acids, Peptides, Physical and chemical properties of protein, denaturation.</p> <p>Energy: unit of energy, food as sources of energy, energy value of food, The body's need for energy, B.M.R. activates for utilization of food to fat energy requirement.</p>	12
IV	<p>Minerals: Functions, sources, and deficiency of following minerals: calcium, iron, iodine fluorine, sodium, potassium (in very brief),</p> <p>Enzymes: Nomenclature, definite specificity, catalysis regulations enzyme kinetics, Factors influencing enzyme activity, controlling enzyme, actions, processing, modification of food by endogenous enzymes, Enzyme Inhibitors in foods.</p>	12
V	<p>Vitamins: classification, unit of measurement, sources, functions And deficiency (very brief) about following :</p> <p>vitamins: Fat soluble</p> <p>vitamins: vitamin A., Vitamin D, Vitamin E, Vitamin K-Water soluble vitamins: Ascorbic acid, Thiamin, Riboflavin, Niacin, Other member of B-complex such as Folic acid.</p>	12
<p>Keywords: Food and Nutrition , Carbohydrate, Protein, Minerals, Enzymes, food groups, structure and composition, methods of improving nutritional quality of food.</p>		

Part C: Learning Resources

Text Books. Reference Books, Other Resources

Suggested Readings:

1. Food Science - B.Srilaxmi, seventh edition, New Age International Publisher.
2. Foods Facts and Principles - N.Shakuntala Manay, Third revised edition, New Age International Publisher.
3. Text book of Food Science and Technology -Avantina Sharma, Third Edition, CBS Publisher and Distributors. Pvt. Ltd.
4. Food Science and Nutrition - Sunetra Roday, Third Edition, Oxford University press.
5. Food Science : Norman N. Potter, Joseph H. Hotchkiss, Fifth Edition, CBS Publisher and Distributors. Pvt. Ltd.
6. Introductory Nutrition Guthrie, Hele, Andrews, 6th Edition, St. Louis, Times Mirror Mosby College.
7. Fundamentals of Foods and Nutrition - Mudambi S.R., M.V. Rajgopal, 2nd ed, Wiley Eastern Ltd.

E-Learning Resources:

1. Basic Nutrition & Food Chemistry
 - <https://youtube.com/watch?v=oaQyiVdeluE&feature=share>
 - <https://youtu.be/GgUEkRBPPT0>
 - <https://youtu.be/a-pXxDr1Vjk>

- <https://youtu.be/4IMhVISEcxA>
- <https://youtu.be/4iDi7fjSAGE>
- <https://youtu.be/o6s1jGdo7po>
- <https://youtu.be/FMZNmgmwXag>
- <https://youtu.be/B0vLIHvNxAY>
- https://youtu.be/6EHdeYmq_ic

2. Carbohydrates

- <https://youtu.be/FoswKE7tUH8>
- <https://youtu.be/ukiLprtX2J0>
- <https://youtu.be/I0QxvmCAPbQ>
- <https://medlineplus.gov/carbohydrates.html>

3. Protein

<https://www.google.com/search?q=protein&>

4. Food groups

<https://www.google.com/search?q=food+groups&>

5. Vitamin

<https://www.google.com/search?q=vitamin+a&>

6. Enzymes

<https://www.google.com/search?q=enzymes&>

Part D: Assessment and Evaluation

Suggested Continuous Evaluation Methods:-

Maximum Marks: 75

Continuous Comprehensive Evaluation (CCE): 15

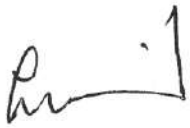
University Exam (UE): 60

<p>Internal Assessment: Continuous Comprehensive Evaluation (CCE)</p>	<p>Class Test Assignment/Presentation</p>	<p>Two Test each of 15 Total Marks: 15 (Mean of Two Tests + Assignment Divided by 2)</p>
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आज दिनांक 31.05.2022 को केन्द्रीय अध्ययन मण्डल की मीटिंग गृहविज्ञान विभाग में आयोजित की गई जिसमें निम्नलिखित सदस्य उपस्थित हुए तथा विभिन्न गृहविज्ञान से संबंधित विषयों के पाठ्यक्रम संशोधित एवं अनुमोदित किये गये-

डॉ. सीमा मिश्रा, शासकीय बिलासा कन्या महाविद्यालय, बिलासपुर	- अध्यक्ष,
डॉ. बबीता दुबे	- प्रतिनिधि, उच्च शिक्षा विभाग, नया रायपुर
डॉ. भारती सेठी, डॉ. खूबचंद बघेल शासकीय स्नातकोत्तर महाविद्यालय, भिलाई-3, दुर्ग	- सदस्य
डॉ. संध्या वर्मा, शासकीय कला एवं वाणिज्य महावि. देवेन्द्र नगर, रायपुर	- सदस्य
डॉ. संध्या मदन मोहन, प्राचार्य, भिलाई महिला महाविद्यालय, भिलाई, एवं अध्यक्ष, अध्ययन मण्डल, हेमचंद्र यादव विश्वविद्यालय	- सदस्य
डॉ. रश्मि मिंज, दूधाधारी महिला महावि. रायपुर	- सदस्य
डॉ. अल्का दुग्गल, वामन राव पाटनकर महिला महावि, दुर्ग	- सदस्य
डॉ. निशा श्रीवास्तव, होलीकास महिला महावि. अंबिकापुर	- सदस्य
डॉ. शिप्रा बनर्जी, दूधाधारी महिला महावि. रायपुर	- सदस्य
श्रीमती ममता आर, देव, शासकीय कमलादेवी राठी महिला स्नातको. महावि. राजनांदगांव छ.ग.	- सदस्य
सुश्री सुषमा घई, शासकीय बिलासा कन्या महाविद्यालय, बिलासपुर	- सदस्य
डॉ. दीपाली राव, शासकीय घनश्याम सिंह गुप्त स्नातको. महावि, बालोद	- सदस्य
डॉ. अर्चना दीक्षित, शासकीय बिलासा कन्या महाविद्यालय, बिलासपुर	- सदस्य
डॉ. शोभा महिस्वर, शासकीय माता शबरी महावि. बिलासपुर	- सदस्य

डॉ. वर्षा डोडिया, विषय विशेषज्ञ तथा शेष अन्य सदस्य आँन लाइन उपस्थित रहे,



Part A: Introduction			
Program: Certificate Course		Class: B.Sc. Food & Quality Control I	Year: 2022
		Year	Session: 2022-2023
1	Course Code	FQ-2T	
2	Course Title	Food Microbiology And Sanitation	
3	Course Type	Theory	
4	Pre-requisite(if any)	NO	
5	Course Learning Outcomes (CLO)	At the end of this course, the students will be enable to: <ul style="list-style-type: none"> • To understand Basic Knowledge of Microbiology. • To understand Basic knowledge of relationship of micro organisms to sanitation. • To understand Basic knowledge of Importance of personal hygiene of food handler. • To understand Basic Knowledge of Food Safety • To understand Basic Knowledge of Microbiological Food standards 	
6	Credit Value	Theory: 4	
7	Total Marks	Max. Marks: 60+15	Min Passing Marks : 25

Part B: Content of the Course		
Total Periods: 60		
Unit	Topics	No. of Periods
I	Introduction to microbiology: its relevance to everyday life: General morphology of microorganisms; General characteristics of fungi, virus, protozoa, algae. Control of microorganisms: Effects of environmental factors on growth of microorganisms: pH, Water activity, oxygen available.	12
II	Microbiology of different foods spoilage and Contamination: Sources, types effects on the following :Cereals & Cereal products, Sugar & Sugar products, Vegetable & fruits, Meat & Meat products, Fish & other sea foods, Eggs & poultry. Milk & Milk products, Canned foods, Environmental microbiology water, air, soil and sewage.	12
III	Microbial: intoxications & Infections-sources of contamination of foods. Toxin production and physiological action. Sources of Infection of foods by pathogenic organisms: symptoms & method of control, Beneficial effect of microorganisms, Relevance of microbiological standards for food safety.	12

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IV	The relationship: of micro organisms to sanitation, Effects of micro organisms on food borne illnesses: Bacteria, virus, molds, yeasts and parasites, Other Food hazards-chemicals, antibiotics, hormones, metals contamination poisonous foods.	12
V	Importance of personal hygiene: of food handler: Habits: clothes, illness, Education of food handler in handing and serving food. Safety in food processing, storage, handling and preparation control of Spoilage: safety of left to left: over food. Cleaning methods sterilization and disinfection-products and methods use of detergents, heat, chemicals, Sanitation: kitchen design equipment and systems, structure and layout of food premises, maintaining clean environment, Selecting and installing Cleaning equipment, Waste product handling planning for waste disposal.	12
Keywords: Introduction to microbiology, Control of microorganisms, Microbial intoxications & Infections, The relationship of microorganisms to sanitation, Importance of personal hygiene of food handler.		

Part C: Learning Resources	
Text Books. Reference Books, Other Resources	
Suggested Readings:	
<ol style="list-style-type: none"> 1. Food Microbiology - Frazier, W.C 4th ed. 1988. Mc Graw Hill, New York. 2. Environmental Sanitation in India – Kawata K. “” 1963 Edition. Lucknow Publ. House. 3. Microbiology”- Pleezar H.J. and Rober D. 2nd ed. Mc graw Hill, New York. 4. Basic Food Microbiology- Banwart G.T. 1987 Edition, CBS Publ. New Delhi. 5. MOOC course Food Microbiology and Food Safety course no.71. 6. MOOC course Solid and hazardous waste management- V.K. Garg course no.40 7. SWAYAM portal based course Food Microbiology course no-39. 8. SWAYAM portal based course Introductory Microbiology course no-37. 9. SWAYAM portal based course Advanced Microbiology course no-33. 	
E –Learning Resources	
<ol style="list-style-type: none"> 1. Food Microbiology https://www.youtube.com/results?search_query=food+microbiology 2. Hygiene https://www.youtube.com/results?search_query=hygiene 	

Part D: Assessment and Evaluation		
Suggested Continuous Evaluation Methods:-		
Maximum Marks: 75		
Continuous Comprehensive Evaluation(CCE): 15		
University Exam (UE): 60		
Internal Assessment: Continuous Comprehensive Evaluation (CCE)	Class Test Assignment/Presentation	Two Test each of 15 Total Marks: 15 (Mean of Two Tests + Assignment Divided by 2)

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Part A: Introduction			
Program: Certificate Course		Class: B.Sc. Food & Quality Control I Year	Year: 2022 Session: 2022-2023
1	Course Code	FQ-1P	
2	Course Title	LAB1: Food Microbiology	
3	Course Type	Practical	
4	Pre-requisite(if any)	Theoretical Knowledge of Food Microbiology	
5	Course Learning Outcomes (CLO)	<p>At the end of this course, the students will be enable to:</p> <ul style="list-style-type: none"> • Weight and Measurement standard for cooking. • Preparation of Low Cost Nutritional Recipe. • Identification looking various micro-organisms. • Preparation of Culture to develop colonies of micro-organism. • Staining Techniques. • Use of Laminar Flow for growing micro organism colonies. 	
6	Credit Value	Practical: 2	
7	Total Marks	Max. Marks: 50	Min Passing Marks : 17

Part B: Content of the Course	
Total Periods: 30	
Tentative Practical List	<p>Note: This is tentative list; the teacher concern can add more Experiments as per Requirement.</p> <ol style="list-style-type: none"> 1. Use and care of Kitchen equipment. 2. Controlling Techniques A) Weights and Measures standard and house hold measures for raw and cooked food. 3. Cereal and flour mixtures-basic preparation – Boiled rice and rice pulao, Chapati, puri, paratha, Sandwiches, Pastas, Pancake, biscuits, cakes, cookies. 4. Pulses and legumes-using whole de- husked and sprouted. 5. Vegetables- Simple salads, Dry Vegetables, Curries 6. Fruits- Fruit preparations using fresh and dried-stewed fruit, fruit salad. 7. Milk-Curds, paneer and their commonly made preparation, Milk based simple desserts and puddings- custards, kheer, ice-cream. 8. Meat- cuts of meat, Meat preparations, Poultry, Fish. 9. Hard and soft cooked poached, scrambled, fried, omelets. 10. Soups- Basic, clear and cream soups. 11. Snacks- Pakoras, cheese, toast, upma, poha 12. Peanut, chikki, til laddoo 13. Demonstration of the different parts of microscope their use & care. 14. Preparation of Bacterial smears simple staining. Spore staining, staining of moulds & yeast.

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15. Preparation of common laboratory media for cultivation of Bacteria yeast & fungus moulds.
Field Work-Collection data regarding prevalence of micro-organism diseases in local urban and rural community

Part C: Learning Resources

Text Books, Reference Books, Other Resources

Suggested Readings:

1. Food Science - B.Srilaxmi, seventh edition, New Age International Publisher.
2. Foods Facts and Principles - N. Shakuntala Manay, Third revised edition, New Age International Publisher.
3. Text book of Food Science and Technology -Avantina Sharma, Third Edition, CBS Publisher and Distributors. Pvt. Ltd.
4. Food Science and Nutrition - Sunetra Roday, Third Edition, Oxford University press.
5. Food Science: Norman N. Potter, Joseph H. Hotchkiss, Fifth Edition, CBS Publisher and Distributors. Pvt. Ltd.
6. Introductory Nutrition Guthrie, Hele, Andrews, 6th Edition, St. Louis, Times Mirror Mosby College.
7. Fundamentals of Foods and Nutrition - Mudambi S.R., M.V. Rajgopal, 2nd ed, Wiley Eastern Ltd.

E-Learning Resources:

1. Preparation of bacteria staining
<https://www.google.com/search?q=preparation+of+bacterial+smear&sxsrf=ALiCzsZHRtJDIN2mf4TpbUijlz2mYvDPEA%3A1654238687481&ei=362ZYsD>
2. Cultivation of fungi
<https://www.youtube.com/watch?v=FcW5tHrbAos>
3. use and care of kitchen equipment
<https://www.google.com/search?q=use+and+care+of+kitchen+equipment&sxsrf=ALiCzsZ3iAIPZbpyEndDZ-zEzotINir>
4. Pudding preparation
<https://www.google.com/search?q=pudding+recipe&sxsrf=ALiCzsblFqDLHWcNDSw-OamS-7gGYK33Q%3A1654239>

Part D: Assessment and Evaluation

Suggested Continuous Evaluation Methods:-

Maximum Marks: 50

Continuous Comprehensive Evaluation (CCE): Not Applicable

University Exam (UE): 50

Internal Assessment:

Continuous Comprehensive Evaluation (CCE)

Class Test
 Assignment/Presentation

Not Applicable

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डॉ. सीमा मिश्रा, शासकीय बिलासा कन्या महाविद्यालय, बिलासपुर	- अध्यक्ष,
डॉ. बबीता दुबे	- प्रतिनिधि, उच्च शिक्षा विभाग, नया रायपुर
डॉ. भारती सेठी, डॉ. खूबचंद बघेल शासकीय स्नातकोत्तर महाविद्यालय, भिलाई-3, दुर्ग	- सदस्य
डॉ. संध्या वर्मा, शासकीय कला एवं वाणिज्य महावि. देवेन्द्र नगर, रायपुर	- सदस्य
डॉ. संध्या मदन मोहन, प्राचार्य, भिलाई महिला महाविद्यालय, भिलाई, एवं अध्यक्ष, अध्ययन मण्डल, हेमचंद यादव विश्वविद्यालय	- सदस्य
डॉ. रश्मि मिंज, दूधधारी महिला महावि. रायपुर	- सदस्य
डॉ. अल्का दुग्गल, वामन राय पाटनकर महिला महावि, दुर्ग	- सदस्य
डॉ. निशा श्रीवास्तव, होलीकास महिला महावि. अंबिकापुर	- सदस्य
डॉ. शिप्रा बनर्जी, दूधधारी महिला महावि. रायपुर	- सदस्य
श्रीमती ममता आर. देव, शासकीय कमलादेवी राठी महिला स्नातको. महावि. राजनांदगांव छ.ग.	- सदस्य
सुश्री सुषमा घई, शासकीय बिलासा कन्या महाविद्यालय, बिलासपुर	- सदस्य
डॉ. दीपाली राव, शासकीय घनश्याम सिंह गुप्त स्नातको. महावि, बालोद	- सदस्य
डॉ. अर्चना दीक्षित, शासकीय बिलासा कन्या महाविद्यालय, बिलासपुर	- सदस्य
डॉ. शोभा महिस्वर, शासकीय माता शबरी महावि. बिलासपुर	- सदस्य

डॉ. वर्षा डोडिया, विषय विशेषज्ञ तथा शेष अन्य सदस्य ऑन लाइन उपस्थित रहे.

