# **DETAILS OF COURSES**

COURSE TITLE METHODOLOGY AND PERSPECTIVES

OF SOCIAL SCIENCES

COURSE CODE WAS1 BO1

STREAM SOCIAL SCIENCE

No. of Contact hours

Aim of the Course

The course intends to familiarize the students with the broad contours of Social Sciences and their methodology.

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Objectives of the course

- Identify the main concerns of social science disciplines.
- Articulate the basic terminology and theories prevalent across disciplines.
- Understand qualitative and quantitative models within the social sciences.
- To learn to apply the methods and theories of social science to contemporary issues
- Critically read popular and periodical literature from a social science perspective.

# Course Outline

MODULE I - Introduction to Social Sciences

Emergence of Social Sciences - Thomas Hobbs - john Locke. Historical background. of disciplinary diversification -an analysis of the disciplines that make up Social Sciences - basic principles and concepts - epistemology of social sciences- relevance of the study of social sciences.

Module II -Development of Social Sciences

Social sciences and their inter relationships :sociology, (Comte, Webber - ) Political science-

- Anthropology- Economics- History(vico - Ranke and Hegel), West Asian tradition in historical writing- ,Ibn hisham, Al Tabri, Al- Masoodi, , Ibn kaldun ,

Module III. Objectivity in Social Sciences

What is Objectivity- fact- evidence, empiricism, limits to Objectivity in Social Sciences, ethical issues in Social Sciences

Module IV - Research methods and techniques

Identification of the problem-, review of related literature,- bibliography- research questions-hypothesis-, chapterisation-, data collection - classification- analysis of data- documentation-report /thesis writing.

COURSE TITLE: PROBLEMS OF CONTEMPORARY

**INDIA** 

Course Code: WAS5D03 (Open course for the students outside

the department)

Credit: 4

Stream: Social Science

<u>Format:</u> Lectures, continuous assessment based on seminar, assignment, test papers& end semester examination.

# Objectives:

- · To analyse and understand the changes in the contemporary India.
- · To analyse Indian Economic Development through the Ages.
- To understand the foreign policy of India and her role in the world affairs.

## Module I

Consolidation of India as a nation : Integration of princely states, the linguistic reorganization,

regionalism- regional inequality.

# Module II

Foreign policy of India- Formation of Indian Foreign policy- Relation with USA- Russia and China, India and neighbours.

# Module III

Indian economy: The Nehruvian Legacy – Globalisation and economic reforms since 1991-towards an inclusive India.

# Module IV

Political parties in the Independent India; The Congress- The JP Movement and the emergency. The coalition politics and multiparty system.

COURSE TITLE: GROWTH OF NATIONAL MOVEMENT IN

**INDIA** 

Course Code: WAS6 B 12

CREDITS: 4

STREAM: SOCIAL SCIENCE

FORMAT : Lectures, Continuous assessment based on seminar, Assignment, Test Papers and EndsemesterExamination.

### **OBJECTIVES:**

- · To create awareness about the Indian freedom struggle.
- To familiarize the students with different ideologies that shaped Indian National Movement.
- To acquaint the students with the concept of 'unity in diversity' of Indian culture.
- To develop the capacity to marshal facts and evaluate evidence and to discuss issues from a historical point of view.

### Module I:

Emergence of National consciousness in India and establishment of Indian National Congress – Impact of British Rule – Tribal and Peasant Struggles – 1885 - 1920 - Women's Question.

### Module II:

Partition of Bengal and Swadeshi movement – Split in Congress – Moderate Groups – Extremists groups – Lucknow Pact of 1916. Home Rule Movement.

## Module III:

Towards Freedom: 1919-1947. Gandhian strategy — Sathyagraha - Champaran and Kheda — Anti Rowlatt Agitation - Khilafat and Non-co-operation movement — Revolutionary Terrorism - Simon Commission and its boycott — Civil Disobedience Movement -Round Table Conference — Communal Award — Leftist Tendencies — Quit India Movement — Cabinet Mission Plan — Mount Batten Plan - Independence Act of 1947.

### Module IV:

The Politics of Gandhi and Anti-Brahmin movement – Phule, EVR, Sri Narayana Guru, Ayyankali and Ambedkar. Rise and growth of Communalism – Muslim League, Hindhu Maha Sabha, V.D. Savarkar and Hindutwa ideology - Jinnah and Two Nation theory.

COURSE TITLE: MAJOR CONCEPTS IN INTERNATIONAL

**POLITICS** 

Course Code: WAS 5 B 10

Credits: 4

Stream: Social Science

Teaching /Learning Methodology: Lecturers and Learner centered activities like group discussions, classroom seminars, interaction with external experts etc

### **OBJECTIVES:**

The course is meant for understanding fundamentals of major concepts of international relations and politics. The central aim of the course is to help students to think critically about international politics

# Module I:

Nationalism: Meaning, evolution and elements of nationalism - National Power: Meaning, elements and Dimensions - National Interest: Meaning, types and importance of national interest

# Module II:

Balance of Power: Meaning, types and importance-Diplomacy: Meaning, types and importance - Propaganda: Meaning, methods /techniques of propaganda - Disarmament: Need for disarmament, kinds of disarmament- nuclear disarmament

## Module III:

Foreign Policy: Meaning and Objectives, determinants of Foreign Policy,

# Module IV:

Imperialism and Colonialism: Definition, types and objectives — Neo imperialism and neo colonialism- Globalization: Meaning and characteristic features

### SEMESTER IV

# MBG4B04. SOIL AND AGRICULTURAL MICROBIOLOGY

Hrs /week 4 4 credits

Unit 1. Introduction to soil Microbiology - Properties of soil (structure, texture, formation). Types of soil microbes, role of microorganisms in soil fertility; Factors affecting microbial population - moisture, pH, temperature, organic matter, agronomic practices etc.; Soil fertility test.

# SEMESTER III

# MBG3B03. ENVIRONMENTAL AND SANITATION MICROBIOLOGY

4 Hrs /week 4 credits

- Unit 1. Microbiology of air atmospheric layers, organisms in air, distribution and sources.

  Disease forecasting in plants. Indoor and outdoor air. Droplet nuclei, aerosol, infectious dust. Microbiological sampling of air gravity slide, plate exposure, vertical cylinder, Hirst spore trap, Rotorod sampler, Andersen sampler, hand held air sampler, impingers and filtration. Advantages and disadvantages of these techniques. Brief account of air borne transmission of harmful microbes and air borne infections.
- Unit 2. Aquatic Microbiology: Aquatic environment, distribution of microorganisms in aquatic environment - fresh water, estuarine and marine water systems. Factors influencing growth and distributions. Water Purification procedures for single dwelling and municipal water supplies, Concept of indicator organisms, Microbiological examination of water. BOD, COD, Waste water treatment steps and methods. Eutrophication and algal bloom. Brief account of water borne diseases and transmission.
- Unit 3. Solid waste management: Sources and types of solid waste, need for management, Landfills, composting, vermi-composting, anaerobic digesters, methanogenesis and production of biogas. Design and management of biogas plant.

### MBG5B07. FOOD AND DAIRY MICROBIOLOGY

4 Hrs/Week 4 Credits

- Unit 1. Food as a substrate for microorganisms. Types of microorganisms in food Source of contamination - Factors influencing microbial growth in foods (extrinsic and intrinsic) Microbial examination of food- viable colony count, examination of fecal Streptococci.
- Unit 2. Physical and chemical properties of milk. Milk as a substrate for microorganisms. Types of microorganisms in Milk- bacteria, fungi and yeast. Sources of microbial contamination of milk. Microbiological analysis of milk. Rapid platform tests-organoleptic, Clot on boiling (COB), turntable acidity alcohol test, DMC, sedimentation test and pH. Standard plate count, MBRT.
- Unit 3. Food fermentations: Cheese, bread, yoghurt, idli, fermented pickles and fermented vegetables, Ice cream, methods and organisms used. SCP, Probiotics and prebiotics.

# MBG5D02. ENVIRONMENTAL MICROBIOLOGY

2 Hrs/Week 2 Credits

Unit 1. Soil Microbiology: Humus, Microflora of soil, Nitrogen cycle - Nitrogen fixation, nitrification, denitrification. Rhizosphere - Rhizosphere microorganisms.

Unit 2. Faecal pollution of water - waterborne diseases, indicator organisms. Microbiological examination of water. Water purification- aeration, sedimentation, coagulation, flocculation, sand filtration. Disinfection of drinking water, Sewage treatment.

Unit 3. Dispersal of airborne microorganisms, indoor outdoor air Droplet nuclei, aerosol, Air borne diseases.

Unit 4. Global environmental problems: ozone depletion, green house effect and acid rain, their impacts and biotechnological approaches for management. Definition of xenobiotics and biomagnification. composting , vermicomposting and biogas production.

# BCH5D02 LIFESTYLE DISEASES

Credits: 2 Total hours: 36 Hours per week: 2

# UnitI (4h)

# General awareness

Basic biochemistry (Biomolecules- carbohydrates, lipids, proteins, nucleic acids, vitamins, minerals – brief outline), Life style, food habits, healthy habits, and unhealthy habits (brief description only).

## Unit II (8h)

### Atherosclerosis

Characteristics, risk factors (modifiable & unmodifiable), ischemia, myocardial infarction - definition, Diagnosis ( electrocardiography , Exercise ECG – Stress test, Echocardiography , Coronary angiography, Intravascular ultrasound, Magnetic resonance imaging), Prevention ( lifestyle, diet, drugs ), Management ( drugs, angioplasty, stent, bypass surgery)

# Unit III (2h)

### Hypertension

Characteristics, Causes, Diagnosis, Prevention and Management

# Unit IV (2h)

### Stroke

# BT1C03. ENVIRONMENTAL BIOTECHNOLOGY (COMPLEMENTARY COURSE)

 Fundamentals of Ecology: Biotic and abiotic environmental factors, energy flow through ecosystems, renewable and non-renewable resources, physiological and behavioural ecology. Major kinds of ecosystems.

(6 hrs)

II. Kinds of organism interactions, types of communities, characteristics population, succession, water Cycle, Biogeochemical cycles: carbon, nitrogen cycle, phosphorus and sulphur cycle.

(8 hrs)

III. Human Influences on the ecosystem- Pollution, Carbon dioxide and global warming, ozone depletion, acid precipitation, destruction of the tropical forests, loss of biodiversity. Eutrophication. Soil formation, Nutrient availability.

(8 hrs)

IV. Pollution control strategies. Pollution management: In process treatment, End of pipe treatment, Remediation of polluted sites. Preserving nonreplaceable resources. Advantages of biological pollution control methods,

# BT2CO7. ENVIRONMENTAL BIOTECHNOLOGY (COMPLEMENTARY COURSE)

I. Water pollution: Physical, Chemical and Biological characteristics wastewater, bacteriological examination of water- *Escherichia coli* as indicator, Presumptive, confirmed and completed test.

(6 hrs)

II. Treatment of wastewater - Primary, secondary, tertiary and alternative treatment. Advantages of biological wastewater treatment over other methods. Principles and application of Aerobic and Anaerobic waste water treatment methods.

(8 hrs)

III. Biological wastewater treatment processes: Activated sludge, biological filters, rotating biological contactor, Fed Batch Reactor, trickling filters, contact digesters, packed column reactors, Upflow anaerobic sludge blanket, stabilization ponds. Sludge treatment, nitrogen and phosphate removal. Waste treatment using aquatic plants.

(8 hrs)

IV. Principles and application of water purification methods: sedimentation, filtration, distillation, ultraviolet light and chlorination. Methods used for the removal of nitrogen and phosphorus from waste water.

(8 hrs)

# BT3CO11. ENVIRONMENTAL BIOTECHNOLOGY (COMPLEMENTARY COURSE)

 Solid pollution: Domestic and industrial wastes, ex situ and in situ Processes, heap technique. Composting – principals and applications, landfill, vermitechnology, phytore mediation, methanogenesis, biogas, medical solid waste management.

(8 hrs)

II. Bioremediation: Advantages of bioremediation, types of bioremediation. Monitoring the efficacy of bioremediation. Bioventing for controlling oil spills. Bioaugmentation and Biosparging.

(6 hrs)

III. Degradation of xenobiotic by microorganisms, Degradation of Aromatic and chlorinated Hydrocarbons. Degradation mechanisms of naphthalene, benzene, phenol, PCB's, propanil, urea. Biodegradation of petrochemical effluents.

(8 hrs)

IV. Air Pollution: Sources, Health effects of air pollution. Greenhouse effect, acid rain, Control of gaseous emissions, control of pollutants from vehicles, Biomonitoring of air pollution. Removal of air pollutants with biosystems. Biofilter, Biotrickling Filter.

(8 hrs)

### BT6B13. PLANT BIOTECHNOLOGY

- I. Basic techniques of plant tissue culture (Introduction, Definition, Medium preparation and sterilization, inoculation, explant selection, growth regulators, subculture, conditions of culture room, etc.) (7)
- II. In vitro morphogenesis (Organogenesis Meristem culture, Production of virus free plants, embryogenesis and synthetic seeds, significance studies on regeneration single / multiple shoot, root formation, somaclonal variation and its significance, transfer and establishment of whole plants into soil).(15)
- III. Different types of culture (Callus culture, studies on different types of callus formation, cell culture / suspension culture). (5)
- Organ culture: (ovary, ovule, endosperm triploid production, embryoculture, induction of polyembryony, anther culture, in vitro production of haploids and its significance in crop improvement).
- V. Tissue culture and Biotechnological applications in agriculture, horticulture, pharmacology, industry. (8)

### BT6B14. ANIMAL BIOTECHNOLOGY

- Introduction to animal cell culture: Lab Design and equipments. Sterile area, Laminar flow hood. CO<sub>2</sub> incubator. Cryostorage (liquid Nitrogen flask), refrigerated centrifuges freezers (-80<sup>0</sup>C) inverted microscope, Hemocytometer, pH meter, magnetic stirrer, micropipettes and pipette aid.(10)
- Media preparation and sterilization: Sterilization of glass wares: Reagents: Balanced salt solutions, preparation stock of solutions such as amino acids, vitamins, salts, glucose, Hormones and growth factors, antibiotics, role of serum in media, physicochemical properties, CO<sub>2</sub> and bicarbonate, oxguen, osmolality, Temperature, viscosity, filter sterilization of media. (12)
- 3. Primary culture: Mouse embryo cell culture, protocol for Isolation of mouse embryo, Primary explants, Enzymatic disaggregation, warm and cold trypsin treatment, collagenase treatment, mechanical disaggregation and sieving separation of viable and noviable cells. (12)
- 4. Cell lines & Cryopreservation: Immortalization of cell lines with viral genes SV. 40, papillomavirus, Epstein-Barr virus, fibroblast immortalisation, cell line designations maintenance of cell lines, cell morphology, criteria for subculture. States of Cryopreservation, Freezing a cells, Thawing of frozen cells. (15)
- Cytotoxicity: Estimation of viability by Dye exclusion, cell proliferation assays, MTT-based cytotoxicity assay. (5)

# INTELLECTUAL PROPERTY RIGHTS- LANGUAGE REDUCED PATTERN – CLUSTER 4

No. of Credits – 4 No. of instructional hours – 72

# Module 1: OVERVIEW OF INTELLECTUAL PROPERTY 4 hrs

Introduction and the need for intellectual property right (IPR). IPR in India – Genesis and Development. Some important examples of IPR.

# BACHELOR OF BUSINESS ADMINISTRATION BBIIIB04 ORGANISATIONAL BEHAVIOR

Time: 5 Hours per week Credits: 4 Objectives:

 To familiarize the students with the basic concepts of the organizational behavior and to enhance their understanding of the interaction between the individuals and the organizations.

### Module I

Organizational behavior—concepts, meaning, nature, scope features of OB.OB and other disciplines

### Module II

Individual behavior—basic psychological process—personality, determinants of personality—personality traits—perception, factors affecting perception—learning, theories of learning—social learning. Motivation—theories of motivation (Maslow's, Hertzberg, Mc Greger, X and Y theory) financial and non financial motivation.

### Module III

Group—concept of group dynamics—features of group—types of group behavior—formal and informal group behavior—stages of group development— group moral—group norms—group cohesiveness.

15 hours

### Module IV

Leaderships- types—theories of leadership ( Trait theory, Michigan studies and Fideler's contingency model) modern approach to leadership theories—leadership styles. 15 Hours

### Module V

Stress management—meaning, types of stress—consequences of work stress—causes of stress—Conflict, types of conflicts, conflict resolution— Organisational development—meaning, need, benefits and limitations of OD—steps in OD. Organizational changes. 12 Hours

# UNIVERSITY OF CALICUT BACHELOR OF BUSINESS ADMINISTRATION BBIB01 MANAGEMENT CONCEPTS AND BUSINESS ETHICS

# Time: 5 Hours per week Credits: 5

Course objectives:

· To understand the process of business management and its functions

# Module III

Manager vs leader; leadership and motivation; leadership styles; theories of motivation. MBO; Management of performance; Understanding and managing group processes; characteristics of work group, work group behaviour and productivity; team creation and management;

# Module 1V

Ethics, culture and values: Importance of culture in organisations; Indian ethos and value systems; Model of management in the Indian socio political environment; Work ethos; Indian heritage in production and consumption.

# Module V

Business ethics: Relevance of values in Management; Holistic approach for managers in decision-making; Ethical Management: Role of organisational culture in ethics; structure of ethics management; Ethics Committee.

# ENG1A02: WAYS WITH WORDS: LITERATURES IN ENGLISH

COURSE CODE	A02
TITLE OF THE COURSE	WAYS WITH WORDS: LITERATURES
	IN ENGLISH
SEMESTER IN WHICH THE COURSE	1
IS TO BE TAUGHT	
NO. OF CREDITS	3
NO. OF CONTACT HOURS	90(5 Hours / Week)

### ENG2 A03 WRITING FOR ACADEMIC AND PROFESSIONAL SUCCESS

COURSE CODE	ENG2 A03
TITLE OF THE COURSE	WRITING FOR ACADEMIC AND PROFESSIONAL SUCCESS
SEMESTER IN WHICH THE COURSE TO BE TAUGHT	2
NO. OF CREDITS	4
NO. OF CONTACT HOURS	72 (4hrs/wk)

### ENG2 A04 ZEITGEIST: READINGS ON CONTEMPORARY CULTURE

## II COURSE DETAILS:

# Module 1: Indian Constitution and Secularism

- 1. Preamble to the Constitution of India
- 2. Should Gandhi's Assassin be Killed?: Pearl S. Buck
- 3. Toba Tek Singh: Hassan Saadat Manto
- 4. Freedom: Tagore

# **Module 2: Sustainable Environment**

- 1. The End of Living and the Beginning of Survival: Chief Seattle
- 2. On Killing a Tree: Gieve Patel
- 3. Zlateh the Goat: Issac BashevisSinger

# Module 3: Gender

- 1. The Story of an Hour: Kate Chopin
- 2. The First time I Uttered a Prayer: Lee Mokobe
- 3. Claiming an Education: Adrienne Rich

# Module 4: Human Rights

- 1. Refugee Blues: W H Auden
- 2. Amnesty: Nadine Gordimer
- 3. Akkarmashi: Sarankumar Limbale (Extracts from Chapter 1)
- 4. The Meaning of Life: Yuval Noah Harari (Extracts from Chapter 19)

# ENG4 A06 SPECTRUM: LITERATURE AND CONTEMPORARY ISSUES

# COURSE SUMMARY

Module 1:	Literature and Media	15 Hours
Module 2:	Globalization and IPR	15 Hours
Module 3:	Nation and its Boundaries	24 Hours
Module 4:	The Marginalized and their Rights	24 Hours
Evaluation		12 hours

# READING POETRY

### 1. AIM OF THE COURSE

 The aim of the course is to enhance the level of critical thinking of the students to such a degree that the students could critically interact with poems from different contexts: social, political, economic, historical and national as subjects conscious of their own socio-historic specificity.

# WOMEN'S WRITING

### 1. AIM OF THE COURSE

- To introduce students to women's voices articulated in literature from various countries
- To introduce them to the evolution of the Feminist movement and to familiarize them with the various issues addressed by Feminism
- To sensitize them to issues like marginalization and subjugation of women
- · To motivate them to rethink and redefine literary canons

## 2.OBJECTIVES OF THE COURSE

- To enable students to identify concepts of class, race and gender as social constructs and interrelated throughout women's lives
- o To lead them to explore the plurality of female experience in relation of these
- To equip them with analytical, critical and creative skills to interrogate the biases in the construction of gender and patriarchal norms

# Micro economics - II

### Module II: Market structure: Perfect Competiiton

Perfect competition –chareteristics – Price determination in the market period - Short run Equilibrium – shut down point - Longrun equilibrium of a firm and industry – Constant, increasing and decreasing cost industries – Welfare effects of governmnt intervention – Impact of a tax or subsidy.

# Module III: Monopoly

Monopoly – Sources of monopoly – AR and MR curve of a monopolist - Short run and Long run equilibrium – Supply curve of a monopolist – The multiplant firm – Monopoly power – measuring monopoly power – Lerner Index - social cost of monopoly – Regulation of monopoly - Price discrimination – first degree, second degree and third degree – International price discrimination and dumping –Two part tariff, tying and bundling – Peakload pricing - Monopsony – Bilateral monopoly.

# India's Economic Development: National and Regional

# **Objectives**

To expose the learners to some of the key issues facing the Indian economy both at national and regional levels. In this process, as young adults, students are expected to be sensitised about these issues, appreciate and learn to critically assess the role of the government in various economic spheres. The learners are also exposed to numerical information relating to various aspects of Indian economy and India's economic policies. They are expected to develop analytical skills, interpret the economic events and visualise the economic future of India. For all these to happen, teachers are requested to take special care to instruct the students to read the

suggested reference books, collect clippings and articles from news papers and magazines and also develop the habit of following economic survey, economic review and RBI Bulletin. Besides, as against the conventional assignments, each module has 'Suggested Additional Activities' at the end. Teachers need to encourage the learners to explore beyond the texts while attempting these activities.

# BC5B09 HUMAN RESOURCES MANAGEMENT

Lecture Hours per week: 4 Credits: 4

Internal: 20, External: 80

# **Objectives:**

- ➤ To familiarize the students with the different aspects of managing human resources in a organization.
- ➤ To equip the students with basic knowledge and skills required for the acquisition, development and retention of human resources.

### Module I

Introduction to Human Resource Management: Concept – Scope – Importance – Objectives and functions of Human Resource Management – Personnel Management Vs Human Resource Management – Human resource planning, Recruitment and Selection: Man power planning – Concept and objectives – Process of manpower planning – Methods of manpower planning – Conventional Vs Strategic planning – Recruitment: Meaning – Sources of recruitment – Modern trends in recruitment - Selection: Meaning and importance – Steps in selection procedure – Interviews – Types of interview – Test – Types of test – Induction – Job changes – Transfer – Promotion – Demotion – Separation.

20 Hours

### Module II

Human Resource Development: Training – Concept – Need for training – Objectives – Approaches – Methods of training – Training environment – Areas of training – Training evaluation – Executive development – Process and techniques .

# BC5B11 LEGAL ENVIRONMENT FOR CO-OPERATIVES

Lecture Hours per week : 5 Credits: 4
Internal : 20, External : 80

**Objectives:** 

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# BC2C02 MARKETING MANAGEMENT

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- ➤ To provide basic knowledge about the concepts, principles, tools and techniques of marketing.
- > To impart necessary knowledge which help the student to choose a career in the field of marketing.
- ➤ To expose the students to the latest trends in marketing.

# BC5D02 -BASICS OF ENTREPRENEURSHIP AND MANAGEMENT

Lecture Hours per week 3

Internal: 10, External: 40

# Objective:

> To enable the students to have an understanding of the basics of entrepreneurship and organisational management.

### Module I

Foundation of Business: Concept of business - Commerce and Industry - Basic considerations in setting up a business enterprise - Social responsibility of business - Forms of business organisations - Sole trader – Partnership - Joint-stock Companies - Cooperative organisations - State enterprises.

# HIS 1C01 - Method of Historical Research

# MODULEI: Research Methodology: Major Trends

Social research and historical research-History as Knowledge- Positivism- Scientific Method as applied in history- Heuristics and Hermeneutics- Qualitative and Quantitative Methods- Textual Analysis- Oral traditions- Semiotics and study of symbols- Interdisciplinary research

### MODULE II: Research in Practice-I

Formulation of Research problem- Selection of a topic- Research Plan- Research Design- working hypothesis; Collection of data-Primary and Secondary- documents, photographs, relics, oral sources- Repositories- Archives- Museums- Libraries- E'braries- Online Archives. Field Research- Techniques- Surveys- questionnaires- interviews.



PRINCIPAL

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SCIENCE, KONDOTTY

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