



RESEARCH THEMATIC AREAS OF WOLKITE UNIVERSITY

Research Priority Area 1: Agriculture and Natural Resource

Theme 1: Livestock and Fishery Production

- Sub-theme 1: Genetics and breed improvement
- Sub-theme 2: Feed and feeding improvement
- Sub-theme 3: Animal health and welfare
- Sub-theme 4: Input supply and service delivery
- Sub-theme 5: Livestock production and environment
- Sub-theme 6: Beekeeping

Theme 2: Cereal, Horticulture & Oil Crop Improvements

- Sub-theme 1: Seed System
- Sub-theme 2: Agronomy and physiology of crops
- Sub-theme 3: Existing major production constraints (disease & pest)
- Sub-theme 4: Postharvest handling
- Sub-theme 5: Crops breeding and improvement
- Sub-theme 6: Tropical and subtropical fruit
- Sub-theme 7: Coffee production
- Sub-theme 8: Enset production

Theme 3: Biodiversity and Wildlife Conservation

- Sub-theme 1: Biodiversity conservation
- Sub-theme 2: Wildlife conservation and management

Theme 4: Molecular Biology and Biotechnology

- Sub-theme 1: Environmental resistance and genetically crops variety improvement
- Sub-theme 2: Vaccine and drug development
- Sub-theme 3: Cross breeding and tissue culture

Theme 5: Natural Resource Management

- Sub-theme 1: Watershed management
- Sub-theme 2: Soil resource management and agro-forestry
- Sub-theme 3: Forest conservation and management
- Sub-theme 4: Environmental management and climate change
- Sub-theme 5: Irrigation water resources development and management
- Sub-theme 6: Natural resource and social conflict

Theme 6: Natural Resources Economics Concern

- Sub-theme 1: Natural resource & environmental valuation

Theme 7: Agricultural Extension System and Service Delivery

- Sub-theme 1: Technological impact, economic efficacy, value chain
- Sub-theme 2: Food security,
- Sub-theme 3: Agriculture innovation and adoption

Theme 8: Agri-business Marketing, and Value chain

- Sub-theme 1: Value creation and gender dynamics
- Sub-theme 2: Value Chain for Strategic Agricultural Commodities
- Sub-theme 3: Production challenge, cooperative, Farming system

Theme 9: Agricultural Mechanization

- Sub-theme 1: Design and prototyping of farm implements
- Sub-theme 2: Design and prototyping of livestock production and processing technology
- Sub-theme 3: Development of mechanized irrigation system
- Sub-theme 3: Development of packaging and storage technology

Research Priority Area 2: Manufacturing and Engineering**Theme 1: Construction Materials and Technology**

- Sub-theme 1: Construction project management
- Sub-theme 2: Materials science & advancement of materials
- Sub-theme 3: Low-cost construction materials and methods
- Sub-theme 4: Irrigation technology
- Sub-theme 5: Hydraulic structures
- Sub-theme 6: Transport system & safety

Theme 2: Regional and Urban Planning and Design

- Sub-theme 1: Land escape and ecological architecture

Theme 3: Theme 1: Textile and Fashion Technology

- Sub-theme 1: Industrial process and quality control
- Sub-theme 2: Development and optimization of machineries
- Sub-theme 3: Novel technologies and process improvement in textile sectors
- Sub-theme 4: Apparel enterprise development and technology transfer
- Sub-theme 5: Analysis and improvement of sewing workstation for garment industry and related.

Theme 4: Emerging Technology & Innovative Product Development**Research Priority Area 3: Culture and Tourism****Theme 1: Culture & Tourism Development**

- Sub-theme 1: Tourism attraction
- Sub-theme 2: Hotel and service industry for tourism
- Sub theme 3: Theatre and community development
- Sub theme 4: Language, culture and folklore
- Sub theme 5: Identity and tradition
- Sub theme 6: History and heritage management
- Sub-theme 7: Film
- Sub-theme 8: Cultural sports

Research Priority Area 4: Mining and Energy

Theme 1: Earth Resources Exploration

Sub-theme 1: Ground water exploration

Sub-theme 2: Geo-hazard assessment

Theme 2: Energy & Energy Management Systems

Sub-theme 1: Renewable energy

Sub-theme 2: Geotechnical and environmental engineering

Research Priority Area 5: Digital Technology

Theme 1: Information and Communication Technology

Sub-theme 1: Artificial Intelligence and Robotics

Sub-theme 2: Networking and Security

Sub-theme 3: Software and Reverse Engineering

Sub-theme 4: Digital Inclusion

Sub-theme 5: Data Science, Big Data and High-Performance computing

Sub-theme 6: Internet of Things and Embedded System

Sub-theme 7: Telecommunications and IT Infrastructures

Sub-theme 8: Algorithm Designing, Simulation & Modeling and Computer Architecture

Sub-theme 9: Human Computer Interaction

Sub-theme 10: Distributed/Cloud/Green/Mobile/Edge/Pervasive Computing

Sub-theme 11: Augmented and Virtual Reality

Sub-theme 12: Quantum Computing

Research Priority Area 6: Education

Theme 1: Education and Leadership

Sub-theme 1: Quality education

Sub-theme 2: Education policy and leadership

Sub-theme 3: Change and innovation in education

Sub-theme 3: School supervision and managements of change

Sub-theme 4: Curriculum relevance and teacher education

Sub-theme 5: Teaching- learning, assessment and evaluation

Sub-theme 6: ECCE (Early Child Care and Education) and child development

Theme 2: Psychology and Well Being

Sub-theme 1: Behavioral problems in children and adolescence

Sub-theme 2: Psychosocial issues

Sub-theme 3: Social influence on individual behavior

Sub-theme 4: Guidance & counseling

Sub-theme 5: Career development and choices

Sub-theme 6: Disability, vulnerability and inclusiveness

Research Priority Area 7: Health and Wellbeing

Theme 1: Health Promotion and Disease Prevention

- Sub-theme 2: Health care seeking behavior of the community
- Sub-theme 3: Behavioral and social determinants of health
- Sub-theme 2: Health service and safety, outbreak control and management
- Sub-theme 4: Nutrition
- Sub-theme 5: Orphan, disability and socially disadvantaged groups

Theme 2: Reproductive, Sexual, Maternal, Newborn, Child health

- Sub Theme1: Reproductive and sexual health
- Sub Theme2: Maternal, new-born and child health
- Sub Theme3: Young people's reproductive health and substance use/abuse
- Sub Theme 4: Gender based violence and Women empowerment and Harmful traditional practices

Theme 3: Sport for Health

- Sub-theme 1: Mass sport and sport for fitness

Theme 4: Environmental, Occupational Health and Safety

- Sub-theme 1: Housing/health problems in residential and institutional environment
- Sub-theme 2: Food & water handling, safety and hygiene
- Sub-theme 3: Waste management, sanitation and personal hygiene.
- Sub-theme 4: Occupational health and hazards

Theme 5: Communicable & Non-Communicable Disease and Control

- Sub-theme 1: Emerging and re-emerging infectious diseases and communicable disease control
- Sub theme 2: chronic and non-communicable disease
- Sub-theme 3: Mental health & wellbeing

Research Priority Area 8: Governance, Human Security & Macroeconomy Concern

Theme 1: Macroeconomy, Leadership and Governance

- Sub theme 1: Leadership strategy & challenge
- Sub theme 2: Market and government regulation
- Sub theme 3: Business ethics and corporate governance
- Sub-theme 4: Investment climate and industrial policy
- Sub-theme 5: Structural transformation
- Sub-theme 6: Regional economic integration and international finance
- Sub theme 7: Morality, ethics & corruption
- Sub theme 8: Conflict, peace and security
- Sub theme 9: Federalism and local governance
- Sub theme 10: Politics and international relation
- Sub-theme11: Hydro politics
- Sub theme 12: Democratization

Research Priority Area 9: Development & Business

Theme 1: Urbanization, Modernization and Migration

- Sub-theme 1: Urban planning and land governance
- Sub-theme 2: Rural-urban linkages
- Sub-theme 3: Rural and urban infrastructures and utilities
- Sub-theme 4: Unemployment and human capital
- Sub theme 5: poverty reduction & livelihood/income diversification
- Sub theme 6: Entrepreneurship
- Sub-theme 7: Deviance and crime,
- Sub-theme 8: Development projects and social dimension

Theme 2: Business, Economics and Finance

- Sub theme 1: Financial management and auditing
- Sub theme 2: Taxation concern
- Sub theme 3: Financial market and institutions

Research Priority Area 9: Justices and Rule of Law**Theme 1: Human Rights, Public and International law**

- Sub-theme 1: International and trans-boundary water law
- Sub-theme 2: International humanitarian law
- Sub-theme 3: Constitution and constitutionalism
- Sub-theme 4: Media law and access to public information
- Sub-theme 5: Rule of law and administrative law
- Sub-theme 6: Election laws

Theme 2: Protection of Right and Access to Justice

- Sub theme 1: Protection of rights of children, women and other vulnerable groups
- Sub theme 2: Property, economic, labor & employment right
- Sub theme 3: criminal justices & fair trial right
- Sub theme 4: Development & right

Research Priority Area 10: Indigenous Knowledge Development**Theme 1: Agriculture and Natural Resource**

- Sub-theme 1: Livestock production and indigenous knowledge
- Sub theme 2: Indigenous agricultural knowledge and practices

Theme 2: Manufacturing and Engineering

- Sub-theme 1: Indigenous clothing and globalization of fashion products

Theme 3: Culture and Tourism

- Sub-theme 1: Indigenous performance

Theme 4: Health and Wellbeing

- Sub-theme 1: Traditional and herbal medicine
- Sub-theme 2: Traditional health care practices
- Sub-theme 3: Traditional foods and nutritional approaches

Theme 5: Justices and Rule of Law

- Sub-theme 1: Indigenous restorative justice and cultural rights