**Date 19/2021**

**ARBA MINCH UNIVERSITY, COLLEGE OF NATURAL AND COMPUTATIONAL SCIENCES,**

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**CNS 2014 EC (2021/22) FIRST ROUND CALL FOR THEMATIC RESEARCH PROPOSALS**

Arba Minch University, College of Natural Sciences Research Coordination Office is pleased to announce the 2nd round annual call for thematic research proposals for the year 2013 EC to potential academic research staff members to submit their research proposals within the three new research thematic areas of the College of Natural Sciences: ***Environment and Biodiversity research areas*, Biotechnology *research areas* and *Material Sciences research areas*.**

**Guiding Principles**

1. Priority will be given to Research proposal with multidisciplinary fields of study.
2. One research proposal must consist of ATLEAST TWO AND ABOVE NUMBER OF members including the Principal Investigator
3. Female applicants are highly encouraged
4. The proposal format must follow the research guideline of the University (see the annex below)
5. The maximum budget per proposal is 150,000.00 ETH Birr
6. The thematic areas of the College of Natural and Computational Sciences are listed below (Table1)

Table 1 Research Thematic Areas of College of Natural and Computational Sciences

|  |  |  |  |
| --- | --- | --- | --- |
| **S.N.** | **Prioritized**  **Thematic Area** | **Sub Thematic**  **Area** | **Identified Sub-problems** |
| 1 | **Biodiversity and Environment research areas** | **Biodiversity researchareas** | Natural Product Chemistry |
| Study of Traditionally used medicinal plants |
| Characterization,Extraction and testing Plant bioactive compounds |
| Physico-chemical analysis of Soil (fertility and productivity) |
| Restoration of natural ecosystems and native species |
| Land use/land cover change |
| Aquatic and Wetland ecosystems conservation and management |
| Fisheries and aquaculture |
| Forest ecology and biodiversity conservation research |
| Biodiversity conservation |
| **Environmental**  **researchareas** | Dry land biodiversity conservation and management |
| Hydro-geochemical investigation and water quality mapping |
| Solid waste hazard management |
| Hydro-geological modeling |
| Water/air Pollution Control and Monitoring |
| Environmental impact assessment |
| Solid and liquid waste treatment and utilization |
| Climate change, global warming and carbon sequestration |
| Environmental degradation |
| 2 |  | **Biotechnologyresearch areas** | Animal biotechnology |
| Plant biotechnology |
| Environmental biotechnology |
| Fisheries and aquatic biotechnology |
| Microbial enhancement |
| Biopolymers and Biosensors |
| Fermentation and bioreactors |
| Bio-recycling |
| Value added biotechnological products |
| Food Quality and Safety |
| Bioremediation |
| Industrial enzymes |
| Biomedical biotechnology |
| 3 | **Material Sciences research areas** |  | Material Synthesis |
| Design and Characterization for Conducting Polymer-Based Solar Cells |
| Fabrication and Characterization of Organic Solar Cell Devices |
| Design and characterization of fuel cells and sensors |
| Zeolites and bio-renewables |
| Nano-Sciences and Nanotechnologies |
| Materials & Production Technologies |
| Pharmaceuticals  and Chemicals with focus on agricultural inputs (fertilizers, pesticides) and inputs to industries (chemicals, plastic/rubber, fuel, ceramics, glass, paper) and others |
| Sugar processing and by-product utilization |
| Waste valorization and bio-energy intensification |
| Nutrition and food processing |
| Material synthesis and characterization |
| Leather and textile processing |
| Alternative crops for sugar production (other than sugar cane) |
| Electro-analytical techniques for new products and electrochemical waste treatment |
| Green chemicals approach |
| Cell Membrane science and technology |
| Application of Computational and  Mathematical Modeling in Science and Engineering |
| Space Sciences |

**Important activities and Dates**

1. You should submit three hard copies [one copies to the Research coordination office of CNS and two copies to your respective department and the department shall assign reviewers having the closest discipline to the area of the proposal. Moreover, PIs shall send the soft copy of the proposal to the current CNS Research Coordinator, TizazuGebre (PhD), cell phone 0911819234,e-mail: [tizgeb2020@yahoo.com](mailto:tizgeb2020@yahoo.com)
2. Deadline for submission of research proposal is on August 04, 2021 at 5:00 PM (Nehase 28/2013).
3. Public defense of submitted proposals will be between August 14 to 18/2021 (Meskerem 08 to 12/2013).
4. See the Minimum Standard Format for AMU Funded Thematic Research Proposals below and structure your proposal accordingly

**Research Coordination Office, College of Natural and Computational Sciences**

**Minimum Standard Format for AMU Funded Thematic Research Proposals**

**General**

1. Page size: Normal (1” for top, bottom, right and left margins)
2. Title: font size 14, font: Times New Roman, bold, CAPITAL letters, center
3. Headers: Font size 12, font: Times New Roman bold for Header 1; 12 ,bold header 2; 11, italics, bold for header 3
4. Body Text: Font size 12, Times New Roman font
5. Reference, titles for figures and tables: font size 12, font: Times New Roman
6. Proposal should be 1.15 spaced throughout
7. Each paragraph should be spaced (No indent)
8. Number the pages (do not give page number for the cover page)
9. Maximum length of the proposal should be 10 – 15 pages.

**Proposal structure should be in line with the following sequence and components**

1. **COVER PAGE** *[Include the project title, name of the principal investigator, names of co-Investigators, e-mail address, cell phone number (of all investigators), department, total budget, project duration (from-to,) Month and Year].*
2. **The following compnents of the proposal shall be compiled according to the specifies order**
3. Researchers and Reviewers Profile and other Information Form
4. Research proposal Evaluation Criteria (Arba Minch University)
5. Research proposal Evaluation Criteria (Arba Minch University)
6. Research Contract Agreement for AMU Sponsored Projects
7. **ABSTRACT/SYNOPSIS** *(Give an abstract of the proposed research beginning with its central hypothesis and followed by its objectives and proposed methods. Underline the key words. The abstract should not exceed 250 words).*
8. **BACKGROUND AND JUSTIFICATION (STATEMENT OF THE PROBLEM)** *[Discuss the historical development of events regarding the specific topic you are interested to study. Describe basic assumptions/concerns that led you to study this topic. Also include information on the likely contribution to knowledge and Technology adoption or generation that the research will made and its place in current debate/theory. Describe the gaps that the proposed research is intended to fill].*
9. **OBJECTIVES** [State the general and specific objectives of the project clearly].
10. **METHODOLOGY (TECHNICAL DISCUSSION)**

*[Describe the study area, How will you test it? Describe your experiment design briefly and scientifically. Indicate scientific equipment, software, Cite a few key references as appropriate. Be specific about what experiments you intend to conduct and why]*

1. **ETHICAL CONSIDERATIONS** (if any) *[Describe how the research is to address any potential ethical issues]*
2. **BENEFITS AND BENEFICIARIES** *[Specify the expected output of the research and the anticipated beneficiaries. Please also indicate, if possible, how the results will be implemented].*
3. **DISSEMINATION OF THE OUTPUTS** *[State the mechanisms how to disseminate the research results]*
4. **WORK PLAN** *[Describe briefly the work plan for the project including the timetable corresponding to the expected results].*
5. **PROJECT COST BREAKDOWN** *[List the cost of the various line items. The budget should reflect the quantity of equipment and unit price. The kind and type of equipment should be specified. If local travel (though limited) is envisaged, duration and number of persons should be specified].*
6. **REFERENCES** *[Use appropriate and selected publications. In the reference include name of author(s), year of publication, title of the article, name of the journal, volume no., page, in that order].*
7. **DECLARATION**

I/We, the undersigned investigator/s assure that this is my/our original work. No part of this work has been presented anywhere for any purpose (include the name, sign and date of all of the investigators involved).