Online Graduate Courses at Federal University of Viçosa (UFV), Brazil

The Forum for Agricultural Research in Africa (FARA), in partnership with the Universidade Federal de Viçosa (UFV), Brazil, calls for applications from interested African scientists to offer non-degree, virtual mobility online courses taught in English by UFV. This training is part of the mobility component of FARA’s Holistic Empowerment for Livelihoods Program (HELP).

Send a downloaded copy of your form to arifa@farafrica.org

Registration Link: https://bit.ly/3e9QK9y
Application (exchange students or lecturers)

Application procedure

Eligibility
Be a citizen of one of any of the African Union Member states;
Be enrolled in any higher institution in the world as a postgraduate student (for exchange students) or a lecturer in an African institution
There is no limit of age for the short courses;

1. Candidates must be enrolled in a higher education institution, preferably in a graduate program (exchange student); OR must be a lecturers in a higher education institution.
2. Application
3. Candidates are required fill and submit application along with the required documentation online on or before July 22, 2021,
   a. For exchange students: https://forms.gle/IztPE4DUBjV1IJcy5
   b. For lecturers: https://forms.gle/Pu6C92Z9xeHmUqz5
4. Candidates must be formally nominated by their home institution (by their heads of department or representative). Nomination letters must be sent to dri@ufv.br and copied to arifa@faraafrica.org. UFV does not accept “self-nominated” candidates.
5. The coordinators of each course will evaluate application, based on curriculum vitae and transcript of records.
6. Successful candidates will be contacted by UFV international office through their home

Benefits of the courses
i. Access to free online teaching and learning materials
ii. Increased knowledge in area of research
iii. Inclusion in the alumni network of FARA IAR4D practitioners under FARA Post-fellowship plan;

Mandatory Good internet connection to follow the activities!
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<thead>
<tr>
<th>AREA</th>
<th>CODE</th>
<th>NAME</th>
<th>LECTURES</th>
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<tbody>
<tr>
<td>Soil Science</td>
<td>SOL 735</td>
<td>Geosystems, Landscapes and Land Uses in Brazil and West Africa: Convergences and Scenarios</td>
<td>Carlos Schaefer</td>
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<tr>
<td>Biology</td>
<td>BIO 610</td>
<td>Cell Biology</td>
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<td>Biochemistry</td>
<td>BQI 700</td>
<td>Structure and Functions of Macromolecules</td>
<td>Gabriela Maitan-Alfenas</td>
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<td>Mari- sa Alves Nogueira Diaz</td>
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<td>Tiago Mendes</td>
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<td>Animal Science</td>
<td>ZOO 765</td>
<td>Molecular Biology Applied to Animal Production</td>
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<tr>
<td>Computer Science</td>
<td>INF 600</td>
<td>Research Techniques in Computer Science</td>
<td>Alcione de Oliveira</td>
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<td>Food Science &amp; Technology</td>
<td>TAL 706</td>
<td>Food Carbohydrates and Bioactive Compounds</td>
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<td>Plant Pathology</td>
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<td>Plant Disease management</td>
<td>Franklin Machado</td>
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<td>FIP 704</td>
<td>Methods in Molecular Plant Pathology</td>
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<td>Sérgio Brommon-schenkel</td>
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<td>Economics</td>
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<td>Macroeconomics Theory I</td>
<td>Graziella de Castro</td>
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<td>CBF 770</td>
<td>Plant Stress Physiology</td>
<td>Eduardo Gusmão Pereira</td>
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<td>Entomology</td>
<td>ENT 760</td>
<td>Insect Behaviour</td>
<td>Simon Elliot</td>
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**Timetable: UTC -03:00**

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TOPICS COVERED

SOL735 – Geosystems, Landscapes and Land Uses in Brazil and West Africa: Convergences and Scenarios (45h)

1. The physical environment of Brazil and West Africa – the Gondwana connection (10h).
2. Geomorphology, soils and landscapes in West Africa (4h).
3. Geomorphology, soils and landscapes in Brazil (6h).
4. The Human and social dimensions of West African and Brazilian societies (10h).
5. Agricultural traditions in both margins of the Atlantic: the globalization of Tropical Plants (10h).
6. Present and Future of Brazil and Africa interplays (5h).

BIO 610 – Cell Biology (60h)

1. The main characteristics of the eukaryotic cells.
2. Structure and transport across membranes.
4. Compartments and protein sorting.
5. Nucleus.
6. Cytoskeleton.
7. Cell cycle.

BQI 700 – Structure and Functions of Macromolecules (60h)

Structure, functions, properties and methods of analysis of carbohydrates, lipids and membranes, nucleic acids, proteins and enzymes, including extraction techniques, chromatographic analysis and genetic engineering.
ZOO 765 – Molecular Biology Applied to Animal Production (75h)

1. Introduction to Molecular Biology.
2. Structure and function of nucleic acids.
3. DNA replication, transcription and translation.
5. Use of biomarkers in animal production.
9. Genotype x environment interaction.
10. Genetically modified animals

INF 600 – Research Techniques in Computer Science (30h)

1. Notions of scientific methodology.
2. Computing research.
3. Computing research project.
4. Conducting computer research.
5. Presentation of research results.
6. Financing source.
7. Ethics in computer research.
TAL 706 – Food Carbohydrates and Bioactive Compounds (30h)

1. Carbohydrate reactions.
2. Starch.
3. Carbohydrate nutrition and dietary fiber.
4. Bioactive compounds.
5. The protective effect of foods containing bioactive compounds on chronic noncommunicable diseases.

FIP 650 – Plant Disease Management (90h)

1. Concepts and definitions of plant disease control;
2. Epidemiological aspects of plant disease control;
3. Principles of plant disease control (exclusion, eradication, therapy, immunization, protection, avoidance);
4. Control methods (cultural, physical, resistance, biological and chemical);
5. Epidemiological implications of control measures;
6. Importance of decision making in plant disease management;
7. Integrated plant disease management.

FIP 704 – Methods in Molecular Plant Pathology (60h)

1. Structure and function of macromolecules.
2. Nucleic acid replication and protein synthesis.
3. Recombinant DNA techniques.
5. Diagnosis of phytopathogens using molecular techniques.
7. Plant transformation for resistance to phytopathogens.
8. Genomics of phytopathogens.
ERU 605 – Macroeconomic Theory I (60h)

1. State-of-the-Art modern macroeconomics
2. Dynamic methods in macroeconomics
3. Exogenous growth models
4. Endogenous growth models
5. Stochastic growth models

CBF 770 – Plant Stress Physiology (45h)

2. Metabolic adjustments and antioxidant metabolism.
3. Light stress and thermal stress.
5. Nutritional stress and resistance to trace metals.
1. Introduction to Insect Behaviour
2. Insects, Animals or Organisms?
3. Evolution.
4. Proximal and Distal Explanations.
5. Hypotheses and Assumptions.
7. Control of Behaviour
8. Organization of behaviours.
9. Foraging and Optimization
10. Learning
11. Victim–Enemy Behaviour
12. Nutritional Ecology
13. Sensory Organs and Nervous System
14. Communication and signals
15. Acoustic communication
16. Semiochemicals
17. Reproduction
18. Dispersal
19. Haemotophagy in Insects
20. Life in Groups