



UNIVERSITY OF EMBU

SESSION TWO ORIENTATION MESSAGES TO FIRST YEAR STUDENTS

MESSAGE FROM THE DEAN, SCHOOL OF PURE & APPLIED SCIENCES

The School of Pure and Applied Sciences (SPAS) wishes to congratulate each one of you for the effort you put to secure a place at the University of Embu and at the named school. I wish to assure you that we have put all the necessary measures in place to ensure that we shall not disappoint you in your quest of attaining a competitive degree which will be useful in shaping your future successfully.

The programmes in the School of Pure and Applied Sciences are housed in the following three departments:

1. Department of Mathematics, Computing and Information Technology
2. Department of Physical Sciences
3. Department of Biological Sciences

The programme you are admitted to falls in one of the three Departments and as such, you will be joining one of the three Departments. In your course of study, you shall be expected to attend online and face to face lessons as you will be guided from time to time. In addition, you shall in due course be informed of the logistics of the practical sessions which you may be required to attend. We assure you that all measures shall be put in place to ensure that no student is disadvantaged in the process of undertaking both online learning and the laboratory sessions. We urge you to stay safe by observing the measures put in place to ensure that you are not exposed to COVID -19. Kindly use the email provided at the end of the message to give us feedback on our progression in the learning and teaching since the semester has already begun.

We take note that it is through hard work and determination that you have secured a place at the esteemed University of Embu. This is therefore to call upon you to continue with the same determination in your University studies and to advise you to adequately prepare for continuous assessment tests and end of semester examinations so as to continue with your excellent performance. My office and that of the Chairmen of departments remains open for you to come and share with us your concerns, aspirations and any other way we need to support you with.



Kindly also make use of your respective lecturers and your students' government to air your views which we shall not fail to attend to. You are advised to use your leisure time in engaging in productive, self-growing activities geared to building your character. Avoid all activities that do not add value to your lives.

In case of any questions, kindly use the email address: deans.pas@embuni.ac.ke or call 0738 600 497. You can also [direct you queries to any of the Departments using the following links:](#)

<https://biologicalsciences.embuni.ac.ke>

<https://physicalsciences.embuni.ac.ke>

<https://mcit.embuni.ac.ke>

The office of the Dean is located in Room No. 14 and its open from 8.00 am – 5.00 pm on weekdays.

Once again, welcome to School of Pure and Applied Sciences and all the best.

God bless you.

Dr. Millien Kawira

Dean, School of Pure and Applied Sciences

MESSAGE FROM THE CHAIRMAN, DEPARTMENT OF BIOLOGICAL SCIENCES

Class of 2020, it is my great pleasure to welcome you to the University of Embu (UoEm), School of Pure and Applied Sciences (SPAS), Department of Biological Sciences.

I wish to congratulate each of you, first on having secured your University place and second, for having chosen to study in the Department of Biological Sciences.

I wish to assure you that the University of Embu and by extension the Department of Biological Sciences puts you, the student, at the centre of everything it does. Your experience here at UoEm and your success is important to each and every member of staff in this Department.

While you are here at the University, and in particular the Department of Biological Sciences, you will learn new things, acquire new knowledge, and develop new skills for life after University. Welcome to the intellectual and life adventure, to which the department will gladly walk with you.

The Department of Biological Sciences has a special focus on the study of living things. Currently, we are implementing four Bachelor of Science programmes and more are on the pipeline. Again congratulations for making the cut for one of these programmes.



The first programme, and one that defines what the Department is really all about is Bachelor of Science in Biology. This undergraduate degree imparts a foundation of information about Botany, Zoology, and Ecology as well as Molecular and Cell Biology. Upon successful completion of the BSc in Biology, one can enter research and laboratory careers working in technical positions in universities, government, and industry. BSc Biology degree can also serve as a stepping-stone for students planning to attend postgraduate programmes in Biological and Applied sciences such as medicine and veterinary courses.

The second programme in the Department is BSc Microbiology & Biotechnology. Microbiology encompasses the study of bacteria, algae, protozoa, fungi, and viruses in terms of their ecology, biochemistry, physiology, genetics, and their role in various biological processes. Of particular interest is the use of microbes in industrial applications, as well as their rapidly expanding role in biotechnology and genetic engineering. BSc. Microbiology and Biotechnology provides you with skills and knowledge that is exploited by pharmaceutical industries in the development of drugs, vaccines and diagnostics, Food and natural product development among others.

The third programme in the Department is Bachelor of Science in Biochemistry. Biochemistry is the branch of science that explores the chemical processes within and related to living organisms. Biochemistry covers a range of scientific disciplines, including genetics, microbiology, forensics, plant science and medicine. Because of its breadth, Biochemistry is a very exciting field of science. Upon successful completion we would expect you to provide new ideas to understand how life works, support our understanding of health and disease and work alongside chemists, healthcare professionals, policy makers and other professionals.

The Fourth programme, BSc degree in Environmental Conservation and Natural Resource Management encompasses the study of environment, management of forestry and watershed resources, arid and semi-arid lands resources, wildlife and fisheries resources and non-renewable resources. The students will learn how natural resource systems function, how to maintain the functions that are important for ecosystem sustainability and for man's use. The graduates fit well in government and industry in areas such as resources use planning, environmental monitoring and impact assessment, natural resource development, conservation information and education, regulatory activities, and policy development.

On successful completion of your Bachelor's degree, you could proceed to join any of our postgraduate and Masters programmes in Applied Microbiology, Conservation Biology, Plant Ecology, Applied parasitology, Genetics, and Entomology. For more details, please visit <https://biologicalsciences.embuni.ac.ke/>

The Department is also developing programmes in Wildlife Management and Conservation, Bioinformatics, Applied Biology, Fisheries and Aquaculture Technology and



Biomedical Sciences. These are programmes we will be encouraging your friends and colleagues in high school and villages where we all come from to join in the next years.

The Department of Biological Sciences works very closely with other departments in the university such as Department of Physical Sciences, and Department of Mathematics, Computing and Information Technology where you will be undertaking courses in Chemistry, Mathematics and use of Computers. This is to ensure that you get to an all-round knowledge base and skills and that you interact with the larger student community and get a vast university experience.

The Department of Biological sciences is very well equipped with laboratory facilities and highly specialized lecturers with interests in various fields of Biology. For details of who your first contact lecturers in the department are, please visit <https://biologicalsciences.embuni.ac.ke/index.php/faculty/academic-staff>

For details of persons who will take care of all your practical and laboratory lessons, please visit <https://biologicalsciences.embuni.ac.ke/index.php/faculty/technical-staff>.

A computer, laboratory and drawing note books, white lab coat and closed shoes are among the necessary requirements for effective and safe learning. More information will be shared as we continue to interact.

The Department of biological sciences promises to listen to you, guide you through the processes of learning and walk with you in the academic adventure but would also like to emphasize on a few things.

Learning Ethics and Time management

You are entering a less structured environment of the University where you will have greater freedom and the responsibility that comes with that. You will now be expected to be more self-reliant, to be responsible for what you do, for ensuring that you do the work that will be required of you. Make sure you read and understand the timetable, attend your lectures and laboratory sessions that you do the assignments and read the material advised by your lecturers, sit for Continuous Assessment Tests (CATs) and Examinations. Please read the student handbook for more information on requirements of your course. While we expect you to assume a new level of responsibility please realise that you are not alone. If you find things difficult do not run away or hide but seek help. Part of being responsible for yourself is recognising when you need the support of others. Come talk to us in the department. We are here for you.

The greatest thing about university life is the range of new experiences available to you. Take time to note things around you, and to enjoy all that comes with it. Make time for cultural, extra-curricular, religious and volunteer activities. These activities will engage you well and the opportunities are immense, but plan your time well. Ensure that you make enough time for private study, develop a study plan, go to the library, and put the on-line learning resources to good use.



The UoEm environment is cosmopolitan. You have all come from different backgrounds and communities. Discover and embrace the different. Get to know people who are different to you. It could be someone from a different part of the county or country, of a different ethnicity, a different religion, a person with different views to you, or who has different interests and perspectives. By embracing difference, you will get a better understanding both of yourself and of those who are different to you, and therefore help you develop as tolerant individuals.

Do you have any questions? You can contact the chair at: dbs@embuni.ac.ke or nyabuga.franklin@embuni.ac.ke, or the secretariat at mwangi.james@embuni.ac.ke or mercy.njue@embuni.ac.ke. The office of the Chair, Department of Biological Sciences is located in the New Office Block, Room 1. It is served by Mr. James Mwangi in Room 8 and Ms. Mercy Njue in Room 2. Our offices are open on Monday to Friday from 8 am to 5.00 pm. Physical interactions will, however, will follow the Ministry of Health guidelines related to Covid-19 pandemic.

The Department wishes you every success. We are confident that you will find it a worthy experience and investment.

Thank you.

Dr. Franklin Nyabuga
Chairman, Biological Sciences

MESSAGE FROM THE CHAIRMAN, DEPARTMENT OF MATHEMATICS, COMPUTING AND INFORMATION TECHNOLOGY (MCIT)

First and foremost, allow me to warmly welcome you to the University and particularly to the Department of Mathematics, Computing and Information Technology.

Secondly I wish to congratulate each one of you for securing a place at the University of Embu. You worked hard in your Kenya Certificate of Secondary Education, you made it and now I welcome you to commence another important journey in your life. I wish to assure you that we have put all social and technical measures in place to ensure that we shall not disappoint you in your quest of attaining a competitive degree which will be useful in shaping your future successfully in Kenya and globally.

Courses in the Department

Undergraduate Programmes

- Certificate in Information Technology
- Diploma in Information Technology (IT)
- Bachelor of Science in Mathematics with Computing
- Bachelor of Business Information Technology
- Bachelor of Science in Information Technology



- Bachelor of Science in Computer Science
- Bachelor of Science in Statistics

Postgraduate Programmes

- Master of Science Degree in Computer Science
- Master of Science in Applied Mathematics
- Master of Science in Pure Mathematics
- Master of Science in Statistics
- Masters of Science in Information Technology
- PhD in Computer Science

In your course of study, you shall be expected to:

- Attend all the classes: due to Covid-19 pandemic classes for your first semester 2020-2021 academic year will be through the online platform. I implore on you to ensure you have a laptop and that you connect to the internet every time a class is scheduled.
- Maintain high level of integrity in examination. Cheating in examination will lead to automatic expulsion from the University
- Undertake all practical assignments administered by your lecturers. Every practical assignment counts to your final degree classification and therefore must be taken seriously.
- Ensure you maintain high standards of morality if you have to complete your education. Sexual immorality, peer negative pressure and drug & substance abuse must be avoided at all costs
- Respect everyone in the University. Any form of harassment, bullying or disrespect will attract disciplinary action
- Respect University property and property belonging to others. Cases of theft shall not be entertained
- Adhere to all computer laboratories rules. These will become available as we interact during the computer practicals.

More information shall be shared with you from time to time to assist you to benefit from our learning and teaching experiences. I also wish to let you know that we have robust student services aimed at ensuring your comfort at the University. The University has established a students' counselling service which you can make use of in case of any matter which is confusing to you. My office will remain open for you to come and share with us your concerns, aspirations and any other way we need to support you with. Please make use of your respective lecturers and the Student Council to air your views which we shall not fail to attend to. You are advised to use your leisure time in engaging in productive, self-growing activities geared to building your character. Keep company of sensible peers with a high moral standing in the community. Remember you have everything to lose in engaging with such people who live a lie.



Once again, welcome to the Department and the University. I wish you success as you start your academic journey at this prestigious University.

God bless you.

Sincerely Yours,

Dr. David Muchangi Mugo

Chairman, Department of Mathematics, Computing and Information Technology

For More Information, visit: mcit.embuni.ac.ke or visit Chairman Office: New Office Block – Room 3

MESSAGE FROM THE CHAIRMAN, DEPARTMENT OF PHYSICAL SCIENCES

Congratulations for being admitted to the University of Embu. We are delighted to welcome to the Department of Physical Sciences!

Overview of the Department

The Department of Physical Sciences has dedicated staff in areas of Chemistry and Physics together with well-trained technical staff who are in charge of the laboratories.

In its organization, the Department has a Departmental Examinations Coordinator who will handle all your queries regarding examination results.

The Department of Physical Sciences offers three programs

- Bachelor of Science (B130)
- Bachelor of Science in Analytical Chemistry (B134)
- Bachelor of Science in Industrial Chemistry (B136)

A brief on the Programmes on offer

a) Bachelor of Science

The programme offers a foundation for professional development in the physical sciences (Mathematics, Physics, and Chemistry) and biological careers. Besides, the enhanced career prospects that the programme offers, it instils valuable hands on skills that are necessary for further education.

In this programme, the student has an opportunity to choose three sciences that they are interested in and pursue them.

A student may opt to register in to any of these two specializations;

- **Mathematics, Physics and Chemistry (MPC)**



This specialization is for the students are interested in physical sciences and scored at least C+ in any of the three sciences. For the first two years of study, a student registers for four units in each of the three subjects. In third year, a student drops one of the subjects and remains with only two which they now specialize in.

- **Chemistry, Botany and Zoology (CBZ)**

This specialization is for the students who are interested in life sciences (Biology) which they must have at least a C+. In third year, the student will drop Chemistry and continue with Botany and Zoology.

b) Bachelor of Science in Analytical Chemistry

The program develops a student's skills in scientific measurement and identification of chemical compounds that form part of life. A student will register in all the units offered every semester.

c) Bachelor of Science in Industrial Chemistry

The program develops a student's skills in chemical processes that drive industrial systems. A student will register in all the units offered every semester.

Laboratories

The Department has three well equipped laboratories where practical learning of the concepts taught in class happens. A student will be required to register for practical with the technicians and attend all the sessions for the units (where applicable) they have registered for.

Chemistry Club

Besides, the classroom experience, the Department hosts the Chemistry Club where students meet one another while having fun with chemistry, perfect their research and innovative ideas and network with professional in their fields.

Student Obligation

- All students are expected to attend **all** the lectures and practical for the units they have registered for. Failure to which a student will not be allowed to sit for the end of semester examinations.
- All students are expected to sit for **all** the Continuous Assessment Tests (CATs) for all the units they have registered for. Failure to do so will lead to a **retake for the unit**.
- All students are expected to sit and pass all the examinations for the units registered. Failure to sit for examinations will lead to **retake** while failing in examinations may lead to **repeat** or **discontinuation**.



For more information, kindly visit <https://physicalsciences.embuni.ac.ke/> or contact the Mercy at dps@embuni.ac.ke

We look forward to meeting you!

Dr. Joanne Ogunah
Chairman, Department of Physical Sciences

