



MADURAI KAMARAJ UNIVERSITY

(University with Potential for Excellence)

Re-accredited by NAAC with A++ Grade in the 4th Cycle

MADURAI - 625 021



UGC-STRIDE-Integrated Resource Centre for Environment, Climate Change and Biodiversity (IRCECCB)

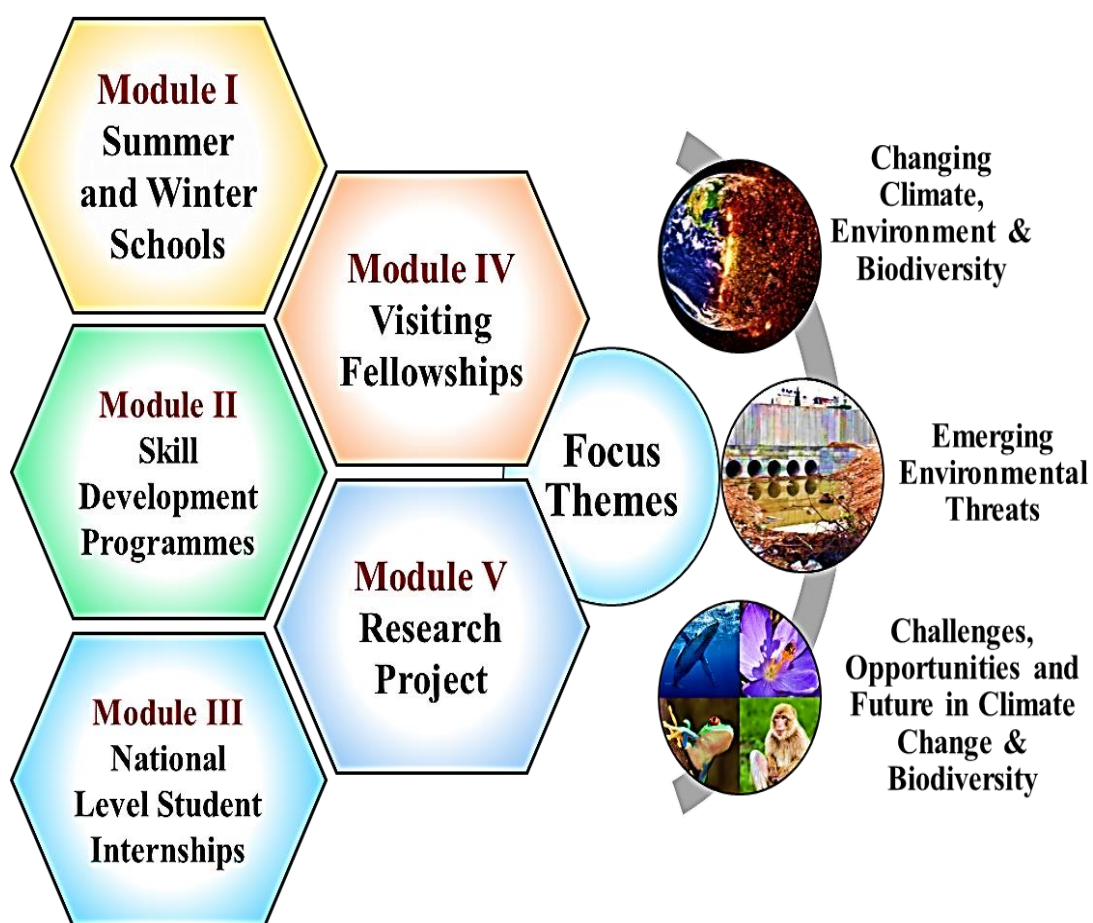
The University Grants Commission (UGC), Government of India (GoI) has recently launched an initiative called “Scheme for Trans-disciplinary research for India’s developing Economy (STRIDE)” to strengthen the research culture, promote innovation and support trans-disciplinary research for the India’s developing economy by funding high impact research grants to universities and colleges. In this regard, Madurai Kamaraj University (MKU) had submitted a proposal to establish an ‘*Integrated Resource Centre for Environment, Climate Change and Biodiversity (IRCECCB)*’ under Research capacity building component of the UGC-STRIDE programme. The proposal was shortlisted and called for presentation on 26.11.2019 at New Delhi. The team headed by the MKU Vice-Chancellor - Prof. M. Krishnan, presented the proposal to the expert committee. After the meeting, UGC selected Madurai Kamaraj University as one among the 16 universities in the country and sanctioned a grant of rupees 1 Crore to operate under the STRIDE programme. This integrated resource centre was specifically proposed to help and protect the biodiversity and the dependent livelihood of millions of people which are affected nationwide due to climate change and other environmental issues. To achieve this,

IRCECCB has designed five modules on three focal themes such as i) changing climate, environment and biodiversity, ii) emerging environmental threats and iii) challenges, opportunities and future in environment, climate change and biodiversity. The modules encompass summer/winter schools, skill development programmes, internships, visiting fellowships and research projects for the benefit of post-graduate students, budding research scholars, researchers/scientists, science writers from various universities and colleges across the country. Through the modules, IRCECCB provides exposure to the concerned candidates to series of lectures, field works, hands-on training on advanced techniques and experiments, opportunity to perform the research work in the centre and collaborate with national experts on thrust areas of climate, environment and biodiversity. The call for the course modules for each year will be published in national newspaper/ science journals and the concerned candidates will be selected based on their academic qualifications and research interests. The IRCECCB will provide platform for gathering, training the young researchers and converging the pool of experts in the focal themes to address and bring logical/ viable solutions for the local issues faced by the public due to changing climate, environment and biodiversity.

List of Participating Faculty Members in the UGC-STRIDE-IRCECCB

Name and Designation	Department	Area of Specialization	Responsibility
Dr. S. Chandrasekaran, Professor & Head	Department of Plant Sciences, School of Biological Sciences, Madurai Kamaraj University.	Biodiversity and Ecology	Coordinator
Dr. B. Vijay Bhaskar, Assistant Professor & Head (i/c)	Department of Bioenergy, School of Energy Environment and Natural Resources, Madurai Kamaraj University.	Black Carbon, Aerosols and Climate models	To train on data collection, retrieval and analysis related to Climate change
Dr. Basherrudin Mahmud Ahmed, Assistant Professor	Department of Theoretical Physics, School of Physics, Madurai Kamaraj University.	Theoretical Physics	To impart problem solving skills
Dr. T. Dharmaraj, Professor & Chairperson	School of Performing Arts, Madurai Kamaraj University.	Cultural Studies	To impart writing skills
Dr. S. Nagarathinam, Professor & Chairperson	School of Linguistics and Communication, Madurai Kamaraj University.	Science Communication	To train in addressing environmental issues with respect to water bodies
Dr. N. Sankar, Director, International Students Affair	Department of Genetic Engineering, School of Biotechnology, Madurai Kamaraj University.	Genetic Engineering	To coordinate Students Exchange Programme

Overall Approach for the UGC-STRIDE-IRCECCB



Implementation Process and Time Frame of UGC-STRIDE-IRCECCB

Themes	Module I	Module II	Module III	Module IV	Module V	Year
Changing Climate, Environment and Changing Biodiversity	Climate Change – Past, Present and Future	Biodiversity – from Concept to Conservation with Reference to Climate Change	Internship for Post-graduate Students in the Focus Themes	Visiting Fellowships in the Focus Themes	Studies on the impact of climate change on plant phenological behaviour, avian fauna and pollinator communities at urban ecosystems in Tamil Nadu	I
Emerging Environmental Threats	Contemporary Environmental Issues	Human Impacts on Environment				II
Challenges, Opportunities and Future in Environment, Climate Change and Biodiversity	Biodiversity and Environment for Livelihood and Sustenance	Environment, Climate Change and Biodiversity– Issues, Awareness and Solutions				III

Details of the Modules of UGC-STRIDE-IRCECCB

	Module I	Module II	Module III	Module IV	Module V
Objective	To provide facilities and guidance to pursue innovative research	To provide technical guidance to acquire skills for carrying out research	To provide research facilities to the PG students of various institutes	To provide facilities to the research scholars from various institutes	To provide research projects on the thrust areas of environment, climate change and biodiversity
Type of Training	Winter/ Summer schools	Skill development programmes	Internship for PG students	Visiting fellowship programmes	Research projects
Participants	Researchers/ Scientists		Post-graduates	Research scholars	Research fellows will be selected for carrying out the project
No. of Participants	20	20	16	20	3 Years
Duration	10 – 15 days	10 – 15 days	2 – 5 months	8 – 12 weeks	
Course Content	Series of lectures, Field works, Laboratory experiments and Discussions	Scientific sessions, Hands-on training on advanced techniques, Data analysis and Presentations	Guidance and providing the research expertise and facilities for PG students	Performing a part of research work in the centre and collaborations	
Criteria of Selection	Call for the course modules will be publicized in a national newspaper/scientific journal. Concerned candidates from various colleges, universities and research institutions will be selected on basis of the qualification and research interests				



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UGC-STRIDE-IRCECCB

1st Virtual Winter School on
“Climate Change: Past - Present - Future”

18th - 27th November, 2020

List of e-Lectures Uploaded

S. No.	Speaker Name	Title of the Lecture	Video Link
1.	Prof. S. Chandrasekaran Co-ordinator, UGC-STRIDE, Dept. of Plant Sciences, Madurai Kamaraj University, Madurai.	<i>About the Winter School & Climate Change and Bioinvasion, Writing Scientific Proposals & Manuscripts</i>	https://youtu.be/7b7i2cNIt9U https://youtu.be/y0q0CgHwc8Q
2.	Dr. Alan W. Gertler Vice President for Research and Chief Science Officer, Desert Research Institute, Nevada, USA.	<i>Impacts of Climate Change on Renewable Energy</i>	https://youtu.be/pO6V9uu7IaE
3.	Dr. Amit P. Kesarkar Head, Scientist - F, WCRG, National Atmospheric Research Laboratory, Gadanki.	<i>Tropical Meteorology & Tropical Cyclones I and II</i>	https://youtu.be/gfAiWFNwOzU https://youtu.be/ObWUn8oOj3U
4.	Dr. Amita V. Mehta Research Scientist, NASA, USA.	<i>Overview of NASA Earth Science Models and Remote Sensing Observations for Assessing Climate Variability and Change</i>	https://youtu.be/LxozkM8KC0U
5.	Dr. B. Vijay Bhaskar Asst. Professor & Head, Dept. of Bioenergy, Madurai Kamaraj University, Madurai.	<i>Air Pollution and Climate Change I, II and Practicals</i>	https://youtu.be/3nJJiPI2cs4 https://youtu.be/4S8kTH2HMHs https://youtu.be/iEeMy4Ko_pg

6.	Dr. S. Ramachandran Senior Professor, Space and Atmospheric Sciences Division, Physical Research Laboratory, Ahmedabad.	<i>Aerosols and Climate Change, Trends in Atmospheric parameters (Practical) & Ozone: Past, Present and Future</i>	https://youtu.be/I2I6w6sumK8 https://youtu.be/wFFyodZf14U https://youtu.be/8Cinrc9hYiQ
7.	Dr. Sundararajan Srinivasan Scientist-E, Coastal and Environmental Engineering, National Institute of Ocean Technology, Chennai.	<i>Impact of Climate Change on Coastal Ecosystem</i>	https://youtu.be/QDZv3EpK37U
8.	Dr. Vikram Madhuvan Mehta Executive Director, The Center for Research on the Changing Earth System (CRCES), Maryland, USA.	<i>Decadal Climate Variability and its Impacts on India</i>	https://youtu.be/2blMmEWS1Ng
9.	Prof. Ram Boojh UNESCO Former Programme Chief, Natural Sciences, New Delhi.	<i>Impacts of Climate Change on Biodiversity</i>	https://youtu.be/i3JCbLdWSHA
10.	Dr. D. Pandiaraja Director, National Centre of Excellence in Statistical and Mathematical Modelling on Bioresource Management, Thiagarajar College, Madurai.	<i>Mathematical Modelling</i>	https://youtu.be/ApcqbwLXg_g
11.	Prof. N. Sankar Head, Department of Genetic Engineering, Madurai Kamaraj University, Madurai.	<i>Influence of Climate Change on Disease Burden</i>	https://youtu.be/GT5F9iYEcGs
12.	Dr. M. Balasubramanian Asst. Professor, Institute for Social and Economic Change, Bengaluru.	<i>Climate Change: An Economic Perspective & Vulnerability to Climate Change: A Case Study from Karnataka</i>	https://youtu.be/8wZPXIBNOmw https://youtu.be/lyZ4hyi2L1c

13.	Prof. T. Dharmaraj Head, Dept. of Folklore and Cultural Studies, Madurai Kamaraj University, Madurai.	<i>Writing Skills for Effective Communication</i>	https://youtu.be/dD-3pOgBEis
14.	Prof. K. S. Rao Head, Department of Botany, University of Delhi, Delhi.	<i>Adaptation Strategies to Climate Change and Variability</i>	https://youtu.be/PgReVRYDCLI
15.	Mr. J. Joyson Joe Jeevamani Research Scientist, National Centre for Sustainable Coastal Management (NCSCM), Chennai.	<i>Coastal Vulnerability to Climate Change</i>	https://youtu.be/SQcDoq9690A
16.	Dr. K. Jayakumar Asst. Professor, Dept. of Animal Behaviour & Physiology, Madurai Kamaraj University, Madurai.	<i>Impact of Climate Change on Coral Reefs</i>	https://youtu.be/WeTkWrb_ojA
17.	Dr. Ebenezer Chellasamy Edwin Resident Scientist, Indian Institute of Astrophysics, Kodaikanal.	<i>Physics of Climate Change</i>	https://youtu.be/ppFmcGQSWEU



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UGC-STRIDE-IRCECCB

1st Skill Development Programme on
“Biodiversity – From Concept to Conservation

22nd – 31st March, 2021

List of e-Lectures Uploaded

S. No.	Speaker Name	Title of the Lecture	Video Link
1.	Dr. Sundararajan Srinivasan Scientist-E, Coastal and Environmental Engineering, National Institute of Ocean Technology, Chennai.	<i>Marine Biodiversity and Conservation</i>	https://youtu.be/tTALOk40Kp4
2.	Dr. Sameer Padhye Principal Scientist, Biologia Life Science LLP, Maharashtra.	<i>Introduction to R</i>	https://youtu.be/5yWFIy8RAw0 https://youtu.be/qwDxrklYvJw
3.	Dr. Karthick Balasubramanian Scientist ‘D’, Agharkar Research Institute, Pune.	<i>Diatom Diversity and Conservation & Diatom Identification Practicals</i>	https://youtu.be/hia0Cq_GxmU https://youtu.be/vllVHKo5pxQ
4.	Dr. Rajah Jayapal Principal Senior Scientist, Salim Ali Centre for Ornithology, Coimbatore.	<i>Avian Biodiversity and Conservation</i>	https://youtu.be/mK5bCNYmPJI
5.	Prof. V. V. Belavadi Emeritus Scientist, Dept. of Entomology, University of Agricultural Sciences, GKVK Campus, Bangalore.	<i>Bee Taxonomy, Diversity and Conservation</i>	https://youtu.be/01aY8ykqzLQ

6.	Dr. Aravind Madhyastha Associate Professor, Suri Sehgal Centre for Conservation Science, Ashoka Trust for Research in Ecology and the Environment, Bengaluru.	<i>Biodiversity Documentation and Digitization</i>	https://youtu.be/zOKnlvak5z0
7.	Dr. Amiya Ranjan Bhowmick Assistant Professor, Institute of Chemical Technology, Mumbai.	<i>'R for Ecologists' Practicals</i>	https://youtu.be/vpy2I1lt18 https://youtu.be/Su3kkk9XQcg https://youtu.be/5b8OkaCpxK0
8.	Dr. Yadvendradev Jhala Dean & Scientist "G", Wildlife Institute of India, Dehradun.	<i>Conservation of Large Carnivores</i>	https://youtu.be/yC0qaQAKUPM
9.	Dr. Anuradha Agrawal ICAR-National Bureau of Plant Genetic Resources, Pusa Campus, New Delhi.	<i>Plant Conservation using Biotechnological Methods</i>	https://youtu.be/U5oQD2Uwely
10.	Dr. Isaac Kehimkar Chairman/ Director, iNaturewatch Foundation, Navi Mumbai, Member of Butterfly Specialist Group, IUCN-SSC.	<i>Butterflies of India</i>	https://youtu.be/MjCnRLnlWFA