

Ramakrishna Mission Vivekananda Centenary College

(Autonomous)

Rahara, North 24 Parganas, West Bengal : 700118



Affiliated to West Bengal University

College with Potential for Excellence

RUSA-funded Institution

DST-FIST Awarded College

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Report on workshops/seminars conducted on Research Methodology, Intellectual Property Rights (IPR), Entrepreneurship and Skill Development during the year 2020-2021

1 st July, 2020	N	Webinar on STEM Education and Then What?	Prof.Subhasish Choudhry, Director; IIT Bombay
1 st July, 2020	N	Webinar on Yantra, Tantra, Mantra	Sri TapanMisra, Former director, Space Application centre, Department of Space, ISRO

On 1st July, 2020, Ramakrishna Mission Vivekananda Centenary College, Rahara held a meeting for the outgoing students on ‘**Capacity Building & Career Guidance**’ for shaping their future and help building their career as a lifelong learner. The webinar was chaired by **Prof. Subhasis Chaudhuri, Director, IIT Bombay** and **Tapan Mishra, Former Director, Space Application Centre, Department of Space, ISRO**

Professor Subhasis Chaudhuri initiated the session questioning the need for study and discussed the real need for studying and different career options for students or Research aspirants and education as apportion in economy. He highlighted the percentages of Indians pursuing higher education and the gender parity among them. He assessed the status of employments in the academic, corporate and research fields and identified the problems faced by Indian researchers such as plagiarism, junk publications, evaluation criteria etc. He compared Science with Arts based on proofs and perception. Discussing on the paradigms of science, he classified it into Empirical, Scientific, Computational, and the most recent Data Science. He summarized his specialized field of Machine Learning in a nutshell as it classifies or regresses any given set of input data through application of functions, and the application of it.

Shri Tapan Mishra, Application centre, Department of Space, ISRO in the second part of this webinar, introduced his subject matter “Mantra Tantra and Yantra” as the three pillars of success. Yantra, the creation, originating within mind and gets contoured through a process Tantra, scientific reasoning. He depicts the journey from reviving a dysfunctional *Marconi Maritime Radar* to developing world class *airborne SAR* with initial failures. He developed Microwave Radiometer, Hyperspectral Imaging System, a CNC machinery, a life-saving Scatterometer etc. and also a world-class avant-garde radar. He showed a bunch of high-resolution pictures captured from his radar and emphasized on being fearless and thinking simple and working out on your own. He showed how human evolution hints the

only way for the success i.e., HARD WORK, which made human the earth's master. He bowed down to Vikram Sarabhai, and his thought of decreasing the student teacher ratio with the advent of space technology and make education readily available everywhere.

During the interactive session the speaker responded to various career and job-related questions on the wide spectrum of disciplines. The take away lesson was to follow one's passion to succeed and learning never ceases even if involved in a typical field of study.

18 th July, 2020	N	Webinar on Capacity Building & Career Guidance	Prof. Anil Sahasrabudhe, Chairman, All India Council for Technical Education, New Delhi
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Prof. Anil Sahasrabudhe, Chairman, AICTE emphasized the need of excellence in both inner faculties and outer facilities for a fruitful academic pursuit. He emphasized the role of observation of nature and taking a holistic view of knowledge in science education. According to him, physical sciences, humanities and commerce all are interconnected disciplines from a social perspective. He gave examples from Astronomy to Medical Science whereby various natural phenomena were studied by our forefathers in India leading to evolution of a rich repository of traditional knowledge and practices. Taking examples from atomic and rocket science he emphasized that every advancement in technology has dual use. He said, constant endeavour to find solutions to day to day problems and bring about societal good should be the aim of scientific research. He highlighted how science has significantly eased and enriched our lives in the last three decades through the advancement in communication, connectivity and medical care. He stressed on the significance of connecting our past realizations with the modern methodologies in the field of science by its constant pursuit through investigation, experimentation and validation. He regarded the study of ancient scientific literature and practicing of yoga very helpful in this regard. He emphasized keen observation and the spirit of enquiry as the most important factor for study of science and implore the students to ask questions and the teachers to encourage the students to do so. In pursuit of science and technology satisfying societal needs may not be an apparent or immediate goal but, according to him, every advancement in scientific knowledge will ultimately be helpful in addressing our social needs and concerns. Science can be applied to fulfill our needs of food, shelter, clothes, health and hygiene, and he mentioned many novel policies and programs of the Government of India in this regard. He exemplified how

advancement in science and technology has helped the cause of providing employment, food security and health care.

22 nd July, 2020	N	Webinar on Career prospects for students in higher education in the basic sciences - a contemporary perspective	Prof.Sarit K. Das, Director, Indian Institute of Technology, Ropar
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The National Webinar in Capacity Building and Career Guidance, Ramakrishna Mission Vivekananda Centenary College had the opportunity to have **Prof.Sarit K. Das, Director of IIT Ropar**, as the chief guest and the speaker. He elaborately explained how one must try to leave a mark, to do something for the human race. He brought out the very essence of what science is and what science can lead us to.

He advises that the students who are in for just the love of science should only do science and science should not be treated as a medium to earn money, power or fame. According to one's need, he/she has to make a decision and stick to it in order to survive. One has to have that zeal to immerse the mind deep into thinking and to find solutions.

He also gives us an idea about how the Bachelor and the Master courses of Sciences are to be dealt with and that one must always keep on learning and unlearning concepts in order to understand science fully. On a more career oriented level he also shares how the scenario of employment patterns have been evolving over time and now, only the ones with an in depth knowledge of the subject is preferred, not the ones with a fancy abroad degree. He believes that a person who really can master a subject will always have enough opportunities to work in either teaching or research for making a living out of it.

24 th July, 2020	N	Capacity Building & Career Guidance	Prof.Santanu Choudhury, , Indian Institute of Technology, Jodhpur
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On 24thJuly, 2020, Ramakrishna Mission Vivekananda Centenary College, Rahara held a meeting for the outgoing students on '**Capacity Building & Career Guidance**' for shaping their future and help building their career as a lifelong learner. The webinar was chaired by

Prof.Santanu Choudhury, Indian Institute of Technology, Jodhpur. He started off with the quote from Swami Vivekananda, “By self-effort and faith in one’s power, longing for knowledge and by self – reliance, one can do miracles.” He slowly explained to the young science undergraduate students the meaning of technology, innovation, science and development and the connection between these words and the evolution of mankind. He then explained the word “discovery” with the beautiful example of Sir Isaac Newton and how he discovered gravitation. He finally linked the word “invention” to his lecture and thus beautifully painted a total portrait of research and development in front of our students. He finally says that the life of a scientist is that of adventure where he/she discovers and invents new things with creativity and ideas every day and takes risks just like the very much loved childhood character “Professor Shanku”. He brought references from the works of great personalities like Professor Jagadish Chandra Bose and Steve Jobs and beautifully explained the difference between invention and innovation. He also motivated the students about why they should take up this wonderful adventure of science through the references of recent topics like nanotechnology, biotechnology, and engineering and how other new topics are coming out in the near future. He finally concluded by asking the question that, where do the students want to see themselves – as a discoverer, inventor or innovator in their future career is completely their choice.

28 th November, 2020	S	Motivational Programme For the all students of Microbiology of the college	Prof.Ramkrishna Sen, Professor & Head, Department of Biotechnology, Indian Institute of Technology (IIT), Kharagpur.
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In the webinar, **Prof.Ramkrishna Sen, Professor & Head, Department of Biotechnology, Indian Institute of Technology (IIT), Kharagpur** led the students to the idea that how our own country and other countries like the US has already launched satellites to search for life on Mars. He spoke about how Mars has marsh gas, which is also known as methane and this methane is produced due to the anaerobic action of bacteria. Following this he also spoke a little about the basics of microbiology, how it was introduced as an interdisciplinary field of study and the purpose of studying microbiology. He also mentioned how studying microbiology provides insight about how microbes help in our day to day life processes everyday – like probiotics, different life processes, etc.

He mentioned how he works on different microorganisms like bacteria, protozoa, algae, fungi and viruses. He spoke a bit about the different kinds of microscopes that help us to visualize the microscopic world in this age. He mentioned some of the contributions of a renowned microbiologist, Dr. Ananda Mohan Chakrabarty and his work on pseudomonas strains and also mentioned some of the attributes on which he himself worked on, during his postdoctoral degree. He mentioned the different uses of microbes in processes like waste management, cooking, production of antibiotics and recombinant therapeutic proteins, how microbes aid in nitrogen fixation and help in boosting our health. They also help in cleaning the toxic wastes, and thus he summarized why young people should aspire to research and contribute in the field of microbiology and biotechnology. He encouraged all students, to approach scientific problems in a holistic fashion and also be concerned about the problems like climate change and water scarcity that is soon going to affect our planet Earth.

12th January, 2021	N	Observation of National Youth Day 2021. Webinar on "Swami Vivekananda : His Life and Message"	Prof. Subramanian Yashonath, Emeritus Professor, Solid State and Structural Chemistry Unit (SSCU), Indian Institute of Science, (IISC), Bangalore.
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Fill the brain with high thoughts, highest ideals, place them day and night before you, and out of that will come Great work"- that's what Swami Vivekananda said to us. To commemorate the birthday of Swami Vivekananda, maker of Modern India, National Youth day is celebrated in our college in online mode due to Covid restrictions.

After that our revered Principal Maharaj welcomed our chief guest Prof. Subramanian Yashonath, Emeritus Professor, Solid State and Structural Chemistry Unit (SSCU), Indian Institute of Science, (IISC), Bangalore delivered his speech. Sir Yashonath started delivering his thoughts about Swamiji by Swamiji's Pranam mantra. Then he simply go through the childhood stories of Swamiji which depict the bravery, kindness and spirituality and immense curiosity of Swamiji. After speaking about Swamiji's teenage life, the famous meeting with Sri Ramakrishna Paramhansa and spiritual transformation of Swamiji, he delivered some message and thoughts of Swamiji to us.

24th June, 2021	N	Celebration of 7th International Yoga Day Webinar on Yoga and Youth of India	<ul style="list-style-type: none"> • Prof B.R. Ramakrishna, Vice Chancellor, Swami Vivekananda Yoga AnusandhanaSamsthana • Prof. Y. Narahari, Dean of Division EECS, IISC, Bangalore • Dr.SreekrishnanVenkiteswaran, CTO, GTS cloud unit, IBM
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B.R.Ramakrishna

Throughout his whole lecture Prof B.R. Ramakrishna, Vice Chancellor, Swami Vivekananda Yoga AnusandhanaSamsthana, has highlighted the need of yoga in our daily life that not only keeps us physically and mentally healthy but also develop our spiritual health, in his words- ‘will lead to superhuman from human’. He told about the mistakes in our modern health care system that it treats us as a material but yoga treats us in various aspects like- physical, physiological, phycological and intellectual; that harmonizes the PRANA. So, according to him Yoga a holistic approach is more attractive as it doesn’t suggest any kind of prescription but a regular practice- a lifestyle.

Y. Narahari

Bringing various references from the former speech and various shastra, Upanishads Prof. Y. Narahari, Dean of Division EECS, IISC, Bangalore, tried to highlight that- yoga is totally a Disciplined lifestyle with framed workings. Very interestingly he compared the modern education system and our Vedic education system. He brought out an example from Twaittiriwaupanishada that was about knowing Bramha by Vrigu the son of Sage Varuna. According to his words- ‘....there is no spoon-feeding....’, he says now a days education system is all about spoon-feeding but actual yogic approach is to learn step by step with consciousness, that’s what our Bhagavat Gita also does in a 18 chapter way long process, where Arjuna is taught by Krishna. so, irrespective of the subject we are studying we all must apply a yogic approach to learn the subject.

SreekrishnaVenkate

Dr. SreekrishnanVenkiteswaran, CTO, GTS cloud unit, IBM brought out various examples from various autobiographies and travelogues that defines the meaning of leading a yogic lifestyle. He presented on a new insight that- to lead a yogic lifestyle one has no need to be expert in Upanishadas but needs serious devotion and continuous inspiration from great

books. He in his lecture once mentioned an example whose central meaning is like- whatever wealth it may be spiritual or economical is always dispersed by the wind of death.

24th September, 2021	N	Webinar on “Science For All: To Do Cutting-Edge Research at Trifling Cost”	Prof.RaghavendraGadagkar, DST Chair Professor, Centre for Ecological Sciences, Indian Institute of Science (IISC) Bangalore
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On 24th September, 2021, Ramakrishna Mission Vivekananda Centenary College, Rahara held webinar on ‘**Science For All: To Do Cutting-Edge Research at Trifling Cost**’. The webinar was chaired by **Prof.RaghavendraGadagkar, DST Chair Professor, Centre for Ecological Sciences, Indian Institute of Science (IISC) Bangalore**

At first he describes about the science. According to him, Science is full of facts discovered by many as well as it is an activity that all of us can and should undertake and enjoy. One should be very curious for it and must drive to play an extraordinary role by own. Then he highlighted about the local consequences, that is the most and the worst problem facing by most of the Indian students think science is too expensive as they are not financially feasible, else they all do what other, better endowed people have been done before. He also mentioned the global consequences, that is while in global consequence, its tends to make developing countries mere consumers rather than producer of knowledge, yet many major discoveries in science still come from inexpensive playful exploration. He tried to correlate the science and technology. He told that, we must not confuse between science and technology. A retired person or a student kid may or may not be contribute to the development of new technology, where they surely can contribute their knowledge towards the development. The process of science is as important as the product. These days’ science is wrongly portrayed as an elitist activity accessible to those endowed with large grants and sophisticated laboratories, else good science can be practiced by anyone with sharp mind, without any grants and laboratories.

March to April, 2021	N	Workshop or internship on Development of Soft Skill	Mr. Santosh Kumar
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Total number of session: 15

Time of hosting: From 17th January to 25th April of 2021, weekly on each Sunday

Total hours covered: More than 30 hours (2 hours each day)

Mode of the sessions: Online mode via Google Meet

Total number of students: 18 (B.Sc. Computer Science(H), 3rd Year, Batch of 2018-2021)

Topics covered: In this programme Coach has taught how to act in the tech industry. Students get to know how to communicate with others, how to organize their work, how they need to behave in the time of group discussion, how they can approach the employee of their higher rank etc. Furthermore, he taught what is the significance of teamwork and unity, what is the necessity of a good daily routine and what can be a good routine. Coach has also enlightened the students by giving them an idea of writing a good email, good way to approach for a leave and also he taught what can be the approach to say No to someone in the IT industry.

Activity: He made groups of the students randomly to work in a group when a certain assignment is given. Furthermore he asked each group to name their teams and make a slogan also for motivation. He used to discuss each and every topic in a highly interactive mode. Used to conduct group discussions on a certain topic. He used to assign tasks to the group or sometimes individual to make a PPT on a certain topic and their thoughts on that and after completion they have to present their thoughts by showing the PPT in the meeting in the next class.