BEST PRACTICES OF THE DEPARTMENT

2016 TO 2022

TITLE III. STUDENT SUPPORT PROGRAMMES

Objectives

- 1.Building up self-confidence and competence for the students
- 2. New students receive specific support such as induction programmes
- 3.Support for students who lack required skills and knowledge is provided by appropriate online or offline or blended learning courses and materials
- 4. To promote self-learning opportunities for the students via MOOCs.
- 5. To introduce Certificate courses for developing self-employment opportunity
- 6. To introduce Valueadded courses –discipline specific- for gaining the extra knowledge and practical skills in the subject taught
- 7.To organise activities for inculcating research culture in the students

PRACTICE 1: CERTIFICATE COURSES/ VALUE ADDED COURSES

Department conducts a certificate course - "Hand Embroidery & Needle work" in collaboration with IMOWS training centre, Thrissur during 2016-17,2017-2018,2018-2019 for I year UG students

Certificate course 'Fabric painting and Saree designing' for II year UG students in collaboration with IMOWS training centre, Thrissur. (2018-2019)

MoU:Department signed a MoU with IMOWS training centre, Thrissur on 10/8/2018

2019-2020

Value added course for II year UG students- 'Dairy products and dairy technology' in association with Kerala Veterinary and Animal Sciences University, Mannuthy, Thrissur

2020-2021, 2021-2022

Value added course 'Apiculture-beekeeping' for II year UG students and value added course 'Women and Health' for I year UG students

PRACTICE 2: STUDENT INTERNSHIP

2017-2018

Organised internship at Zoo, II semester PG students participated.

Organised internship at Vijansagar, Ramavarmapuram, S2 UG and S4 UG students completed internship during summer vacation

2018-2019

12 students completed Internship (III DC)

32 students completed Internship (II DC)

28 students completed internship (I DC)

2019-2020

Swatch Bharat summer internship (UG)

12 II DC students completed Swatch Bharat Summer Internship of Central Government of Indiaparticipated in cleaning campaign at Puthoorgramapanchayath, plastic free campaign at PuthoorGovt school, cleaning public toilet, collection and disposal of plastic waste, distribution of plastic bags and pen for school children (tutor-Dr.Petrisia Joseph)

April-May 2020: 24 I DC students (tutor: Dr.Feeba) and 5 II DC students (tutor:Dr.Sheeba)

participated in the summer internship at VinjanSagar, Thrissur.

2020-2021

Institutionalization of student internship- 100% student participation in internship is ensured. Internship in association with Zoo and Museum, Thrissur is organised. The eco-biological details of the animals kept in the Thrissur Zoo was collected by UG and PG students as a part of their internship

programme. They visited the Zoo and a review article was prepared about the 54 animals (Reptiles, Birds and Mammals) which are maintained within the facility. The articles prepared by the students are compiled edited and published by the faculty as a hand book 'ZOO FABLE' with ISBN number. The book is of value to relevant the stakeholders including zoo visitors, zoological professionals and animal activists and it can raise awareness of the ecological needs of animals that should be addressed by the Zoo management association and for public awareness..

2021-2022

100% student participation in internship is ensured. Department has organised a 5 days internship programme for the UG and PG students of the department in association with Foundation for Environmental Conservation, Education and Research (FECER) from 22-11-2021 to 26-12-2021, on the theme "An overview to Urban Biodiversity: Conservation and Management stratagems" via online platform – Microsoft teams https://teams.live.com/meet/95215120996579. 90 students from the I, II & III year UG batches and 22 students from the I year PG batch have participated in the programme. Dr.Bindu K Jose, Dr. Bindu P.U., Snehal Sunny, Dr. Feebarani John, Dr. Honey Sebastian and Sr. Freny Jacob were the faculty coordinators and KesiyaSaji and Joshna Jerry, II DC Zoology students act as the student coordinators

PRACTICE 3: STUDENTS COMPLETED ONLINE COURSES -MOOC

Objectives of the practice:

- Distance learners join in virtual lectures, chat with fellow students, pose questions to professors, take
 virtual exams, conduct research and much more academic activities
- Flexibility- Students have the freedom to juggle their careers because they aren't tied down to a fixed schedule.
- Reduced Costs- Online education can cost less
- Networking Opportunities
- Increased Instructor Student Time.
- Access to Expertise in their area of learning: An online course might give students access to specialized courses that may not be available in an easily accessible or local institution of learning.

2018-2019

12 students from III semester PG, 7 students from I semester PG completed and received certificate in the NPTEL online course offered by IIT Kanpur in the topic 'wildlife conservation' and 'Ecology' respectively in Jan 2019

RimiKuriakose, completed and received certificate in online NPTEL course by IIT, Kanpur in the topic 'Human molecular genetics' in June 2018

5 Students from 6th semester UG completed the online course NPTEL course by IIT, Kanpur in Jan 2019, topic 'wildlife conservation' and 'biomedical nanotechnology'

2019-2020

NPTEL courses- Seven, II year PG students (2018-2020 batch) completed the NPTEL online course offered by IIT Madras and received certificate on the topic "Ecology and Environment"

Eleven, I year PG students (2019-2021batch) completed the NPTEL online course offered by IIT Kanpur, and received certificate on the topic "Wildlife conservation"

2020-2021

Online Courses I year PG

Five students (4 from Self finance and 1 from Aided) completed 12 online certificate courses of various universities and organizations

III year UG

28 final year UG students completed online courses under 'course era

17 final year UG students completed online courses under 'MBRN'

1 final year UG student, NihalaNaseefa completed 4 online courses offered by WHO, Harvarad, Future learn and Alison

II year UG

2 II year UG students completed online courses offered by MBRU

5 students completed online courses offered by Alison

3 students completed online courses offered by Edapt

1 student completed online courses offered by University of Colorado

II year PG

5 students completed online courses offered by WHO Health Emergencies Programme

2 students completed online courses offered by John Hopkins University

1 students completed online courses offered by Common wealth of learning-Canada1

1 students completed online courses offered by Swayam

1 students completed online courses offered by CME Eligible

1 students completed online courses offered by Rice University

2021-2022

Online Courses PG

10 students out of 10 from I year PG (aided) completed online courses and 8 students from II year PG (aided) out of 10 completed online courses offered by various national/intentional organizations

11 students from II year PG (SF) and 14 students out of 15 from I year PG (SF) completed online courses offered by various national/intentional organization

Online Courses UG

21 students out of 33, from III DC completed online MOOC courses, some students have done more than one online courses

20 students out of 30, from II DC completed online MOOC courses, some students have done more than one online courses

20 students out of 35, from I DC completed online MOOC courses, some students have done more than one online courses

PRACTICE 4: ALUMANE LECTURE SERIES- 'ZOOALUMNAR'

2019-2020

23-09-2020: Motivational talk by Sherin Varghese, PG 2019 pass out student, for I semester PG students

27-09-2020: 'Motivational talk on 'Prospects of academia' by UG 2013 pass out students, for all UG and PG students

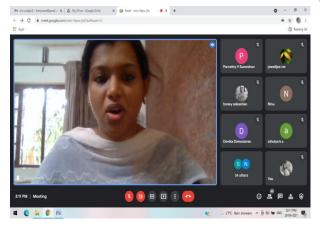
PriyankaN.P, Ph.D Scholar, Sastra University, Thanjavoor, Tamil Nadu

AthulyaGirish K. Ph.D Scholar, National Centre for Biological Sciences, Bangalore

2020-2021

28-09-2021

An orientation and motivational talk was done by the Alumnae MrsJosna Victoria K Johnson.



PRACTICE 5: INDUCTION PROGRAMME FOR THE NEWLY ADMITTED STUDENTS

2020-2021

The department assessed the learning levels of newly admitted students, and planning to organize special programmes for advanced learners and slow learners as well. The tutors of the respective classes of UG and PG are in charge of assessing and monitoring the programme.

17/09/2020: all first semester UG,PG students attended the "Introduction to Online Learning" programme organised by the Department of Computer Science, Vimala College, Thrissurvia online mode and got an idea about the various platforms for online classes, how to join online classes using Google Meet, how to use Google classroom, usage of Linways and Moodle, Online Etiquette and clarification of doubts. Introductory speech on the Department, Faculty members and facilities was done

by Dr Honey Sebastian, HoD, Dept. of Zoology. Google Meet Link: https://meet.google.com/iph-gtwjcix.

Remedial Programme for slow learners and enhanced opportunities for advanced learners

Initial assessment was done by the tutor of UG and PG batches, by collecting the following details using google form links

- Identified individual Strengths, talents and ambition
- Assessed academic and other support needs of students

Advanced Learners and slow Learners were identified based on Entry level marks, Assessment of prior knowledge about subject and Assessment of skills. Other Assessment criterion used for identifying the skills of students include ability for browsing internet, online courses, basic knowledge in ICT methods, English writing and speaking skills, presentation skills, leadership, communication skills and frequency of library references. Data was collected using Google form links

https://docs.google.com/spreadsheets/d/1s_LGRuPz6U2jTaGiicDJ-J_vS2_d0-phXjIYEo5vSSw/edit?usp=sharing

https://docs.google.com/spreadsheets/d/1Z5RVK6kBDzMRH_oXwfq9Ee5sytjs2A4v0qVc2YgRQXg/e dit?usp=sharing

Students were also asked to write about their strength, talents, ambition, the motive behind selecting this course for higher studies and ambition of their parents.

https://docs.google.com/forms/d/e/1FAIpQLSe2bKKL5RTFcO56rczwSTintjCGmdPcbHOtD9q9RFg WaWszsw/viewform?usp=sf_link

 $(https://docs.google.com/forms/d/1HeslIWXKSifSqLbLcO__VmCViDO91Tu_RnKHhS8NhKE/edit)\\$

23/9/2020, 24/09/2020 and 25/9 2020: Apart from conducting online entry level assessment, live Self introduction programme was organized for three days; through Google meet platform on every day for 1.30 hrs. The general rules, time table, curriculum, class attendance, examinations and other requirements were discussed. Tutor, interacted with the students during self-introduction programme and given a preliminary idea about the need of putting their hard core effort in right direction to achieve their goals. She also emphasized that 'Well begun is half done' and motivated students and reminded

them the need of total dedication, determination, unfailing ambition and hard work that IS required for achieving these goals in life. For those students who aim for getting into govt service, she familiarized the CGPT organized coaching classes for civil service, bank and PSC tests.

Department has chocked out the plans and strategies to arrange Remedial/ Bridge Courses to address the knowledge and skills gapsfor slow learners and provide more challenging opportunities/tasks for the advanced learners

Plans for supporting the slow learners

- Department plans to organize remedial / bridge courses with the help of advanced learners, PG students or faculty members
- Remedial Classes are conducted with an aim to improve the academic performance of the slow learners, absentees, late comers and students who participate in sports and other activities. This practice helps the struggling learners to improve subject knowledge and helps them catch up into their peers.
- Group Study System and peer teaching are also encouraged with the help of the advanced learners.
- Student as teacher programme
- Tutorial sessions
- Academic and personal counseling are given to the slow learners by the tutor and/or mentor.
- Professional coaching classes encourage students to join for coaching classes for PSC, bank etc
- Familiarized opportunity for self-employment

Plans for supporting the advanced learners

- Advanced learners are encouraged to enroll in MOOC Courses Swayam, NPTEL, Coursera
- familiarized Provision of additional learning and reference material and encouraged the use of library
- Advanced learners are given the opportunity to enroll for NET/JRF coaching even from II DC onwards
- They have given the opportunity to coordinate Zoo related internship programme of their batch
- Encouraged them to do summer internship in research institutions for learning advanced biological techniques for catering their attitude towards research
- Presentation of a topic of zoological importance once in a year -zoo era
- Advanced learners are encouraged to publish review articles in reputed journals during their UG classes itself
- Project presentation after completing UG project
- Students are encouraged to participate and present papers in various Seminars/ Conferences/ Workshops/ Inter-Collegiate Competitions organized by other colleges/institutions.

- .Encourage Participation in the in-house competitions such as Debate, Group Discussion, Problem Solving Decision Making Exercises, Quiz Programmes and other competitions
- Talented students are motivated to participate in extra-curricular activities, exhibitions and cultural competitions.

2021-2022

28 September 2021: As a part of the Induction Programme for newly joined First year students, Dept. of Zoology, organized a welcome session to introduce the department and faculty members. Dr Honey Sebastian, HOD welcomed all the newly joined students to the Zoology Family. Third semester B Sc Zoology students introduced the faculty members of the department. An orientation and motivational talk was led by our Alumnae MrsJosna Victoria K Johnson. It was followed by the cultural programmes lead by the third semester students and the newly joined students self-introduced themselves. Session ended by 5.00 PM.

30th September 2021: Online Entry level test was conducted by the tutor SrFreny Jacob. Based on that marks and the 12 examination marks, slow learners and advanced learners are identified and the measures adopted by the department in the previous years for catering diverse students are practicing

PRACTICE 6: STUDENT SUPPORT PROGRAMMES INCULCATING RESEARCH CULTURE

I.'ZOO RESEARCH'-PG, UG STUDENT'S PROJECT PRESENTATION

2020-2021

Every year the Journal club 'Zootopia' of the PG department of Zoology organizes Research project presentation by UG and PG students; 'Zoo research'

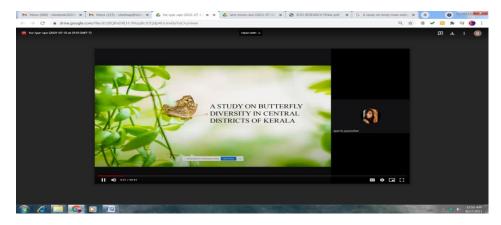
05-06-2021: Eleven 4thsem PG students presented their project before a committee of research guides and other faculty members of the dept. via online G meet

13-07-2021: The Project presentation of 6thSemester B.Sc Zoology Students was held via Google Meet. Teachers and all Sixth Semester B.Sc students from Department of Zoology participated in the programme. The group leaders from each project groups presented their research findings.

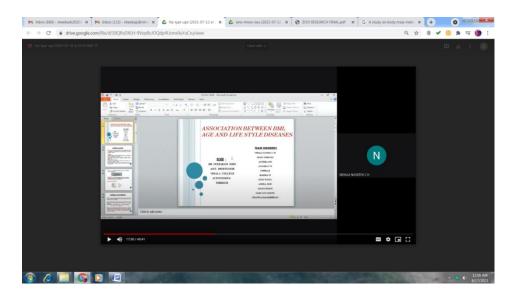
Group 1 : - A study on Butterfly Diversity in Central Districts of Kerala

- Group 2 : Association Between BMI, Age and Life Style Diseases
- Group 3: Distribution and Diversity of Lepidopterans and Odonates in Different Geographical Divisions of Kerala and Tamilnadu

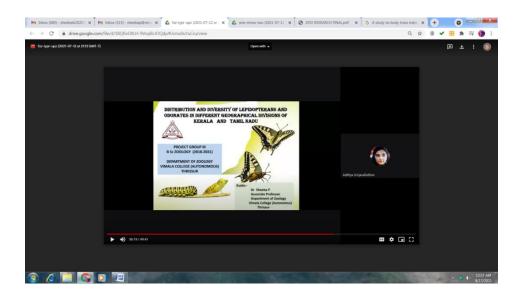
Miss Aparna J from Group I, presented their topic and she gave a picture on different types of butterflies in different localities of Central Districts of Kerala and also explained the diversity of butterflies and the different types of host plants they depend upon.



Miss NihalaNaseefa C H from Group 2, gave a clear picture on Body Mass index and how BMI levels correlate with body fat and with future health risks.



Miss AdithyaGirijavallabhan and Miss Athira C A from Groups 3, focussed their presentation on the diversity of Lepidopterans and Odonates in different geographical regions of Kerala and Tamilnadu.



2021-2022

'Zoo research' PG student's project presentationAIDED BATCH - 24-6-2022, 9 am to 12 am

PG Students of Zoology department (aided-2022 passing out batch)were participated in the session. Fain Francis, Rosemol Johnson and Libiya K. Babu from first year PG were student coordinators. The session was from 8.30.AM to 12:00 PM.

10 Students were presented their PG project

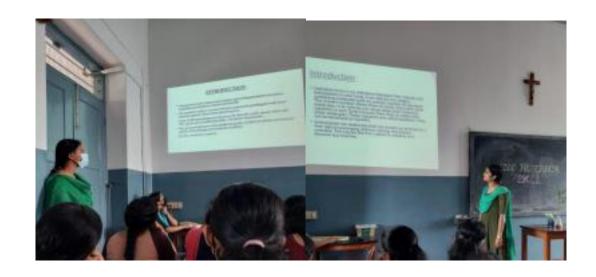
- Comparative analysis of phytochemical constituents and pharmacological properties of stem and root parts of *Sidaacuta* by Agnes Jos C
- 2. Microbial biosorption of lead by Lysinibacillusfusiformis by Ananya P
- Comparative toxicology of Dimethoate upon Terrestrial Micro and Macro Flora by Anrose
- 4. Investigation of symbiotic bacterial influence upon defense mechanism in *Mercinaria* by Arya T R
- 5. Studies on sodium fluoride induced oxidative stress by Bincy C V
- 6. Study of Orthopteran diversity for identifying Critical habitats in Mulamkunnathukavugramapanchayat by Jisna
- 7. Thyroid profiling in learning disabled by Nayana Varghese T,
- 8. Evaluation of Anti-Inflammatory and Membrane Stabilizing Properties of Aqueous Extract of *Desmodiumlongipes* upon HRBC by Shilja E S,

- 9. In vitro evaluation of urolitholytic activity of aqueos extracts of *Phyllanthusniruri* and *Lawsoniainermis* upon inhibition of calcium oxalate crystalization by Swaliha P Abdulwahid
- **10.** Evaluation of anti repellent activity of botanicals against rice weevil (*Sitophilusoryzae*) by Vismaya V V.



Zoo research programme-brochure (aided batch)





4 semester PG (aided) Students presenting their projects



I year PG Students attending the program and teachers providing instructions

'Zoo research' PG student's project presentation SF BATCH

24-06-2022; Project presentation of 4 semester PG (SF) batch students (2022 passing out batch)started at 12 pm and lasted for 3 hrs. The staff co coordinators - Dr. Bindu P U, Dr. Bindu K Jose, Ms. Anila K, Ms. Snehal Sunny and PG Students attended the session. I year PG student, Haritha welcomed the gatheing. The following students presented their project report.

1)AMBILI G R, - Study of amylolytic action by metabolites isolated from endosymbiotic bacteria *Bacillus cereus*.

- 2) ANEENA BABU Microbial mediated degradation of textile azo dye direct red by bacillus subterraneous.
- 3) ANILA VARGHEESE Study of anti-helminthic activity of bio compatible extract of *Psidiumguajava*
- 4) ANISHMA P A Study of lepidopteran diversity for identifying critical habitat in Mulankunnathukavugramapanchayat
- 5) CHRISTEENA BENNY In vivo amylolytic enzyme inhibition mediated antidiabetic potential of *Achyranthesaspera*
- 6) DELPHY THOMSON Pharmacological exploration of *Cinnamomumtamala* leaf extract against *Culexquinquefasciatus* larvae
- 7) DONA VARGHESE An vivo study on acephate induced oxidative stress
- 8) GOPIKA K R Effect of ML349 on breast cancer cell adhesion and migration
- 9) HEMA JOEMON Synthesis and characterization of silver nano particles from aqueous leaf extract of *Clitoriaternatea* and its application as an anti-biofilm agent
- 10) MARY RIYA In silico studies of *Annonamuricata* derived acetogenins to stabilize mutant P53 R2 73H
- 11) NIMITHA P A Isolation and characterization of cellulolytic bacteria from wild herbivores and its biological application



Zoo research programme-brochure (aided batch)

The session was very interesting and informative. All the participants were well satisfied with the programme. Altogether the program was great success without any technical difficulties and network problems. The session ended with a discussion session many students enthusiastically came up with their doubts. I year PG student Kavya concluded the session by thanking all the participants. Teachers gave suggestions and corrected the mistakes and provided instructions to improve their presentations. The paper presentation was well attended by I year PG students. Libiya K Babu of First year PG concluded the session by thanking all the participants and staff.





4 semester PG (SF) batch students presenting the project

II. JOURANL CLUB 'ZOO TOPIA' - THE JOURNAL DISCUSSION FORUM

The journal club organises journal discussion forums every year. PG Students actively participate in the discussion on recent research articles published in the reputed research journals in Zoology (Web Of Science, Scopus, Web Of Knowledge- Indexed Journals). Group discussion was conducted and documented

2019-2020

4-7-2019: Journal of Environmental Pathology Toxicology & Oncology (2018),37(t):27-41.-2018 (Springer)- 10 PG students participated in the discussion

08.08.19: Journal of Food Science Technology (2016), 53(1):8s-901(Springer)-11 PG students participated in the programme

2020-2021

22-10-2020: The Journal *of* Assisted Reproduction *and* Genetics(2009), 26:477–486 (DOI 10.1007/s10815-009-9353-3) - 21 PG students participated in the discussion

2021-2022

05-01-2022: Evolution: Education and Outreach (2018) 11:13 (https://doi.org/10.1186/s12052-018-0087-5) - 25 PG students participated in the discussion

III. NATIONAL LEVEL PAPER PRESENTATION COMPETITIONS

The journal club also organizes **national level paper presentation competitions** for PG students and research scholars during the year 2020-2021 and 2021-2022 via online mode. Best paper award was also given.

2020-2021

9-01-2021:Zootopia, The Journal Club, PG Department Of Zoology organized a National Level Virtual Paper Presentation Competition on 'Modern trends in Biological research'under 3 categories; Health and Diseases, Biodiversity and Environment, Biotechnology & Pharmacology. Best paper award was given under 3 categories. Proceedings of the seminar was published as an edited book with ISBN

Book- MODERN TRENDS IN BIOLOGICAL RESEARCH- A Handbook in connection with the National Level Virtual Scientific Paper Presentation Competition organized by ZOOTOPIA The Journal Club, Department of Zoology, May 2021. Vimala College Publications, Editors: DrIndu MS, Dr Honey Sebastian, DrPetrisia Joseph, ISBN: 978-81-7255-134-6

2021-2022

22-12-2021:Zootopia, The Journal Club, PG Department Of Zoology organized a National Level Virtual Paper Presentation Competition on 'Current Status of Biological Research: An overview' under 3 categories 'Health and diseases', 'biodiversity and 'Biotechnology and pharmacology'. Total 30 PG students and research scholars presented the research paper. Each category sessions were evaluated by experts from the respective fields and the best paper award was awarded to the winners. Proceedings of the seminar was published as an edited book with ISBN

Book-CURRENT STATUS OF BIOLOGICAL RESEARCH: AN OVERVIEW. A handbook in connection with the National level Virtual Scientific Paper Presentation Competition organized by ZOOTOPIA – The Journal club, PG department of Zoology, Vimala College (Autonomous), Thrissur-9. May 2022. Published by Sooryagatha (Publishers), Kochi – 682035, ISBN-978 81 7255 151 3, Editors: DrAnila K and Ms.Alisha KS

IV. PG STUDENT RESEARCH ARTICLES PUBLISHED AS A BOOK WITH ISBN-ZOOLOGIE INNOVANTE

PG students are instructed to write a research article based on their PG research project. Faculty members review the articles and publish it as an edited book with ISBN. Two books were published during 2020-2021 and 2021-2022

- 1. ZoologieInnovante Series 1, May 2021. Vimala College Publications. ISBN: 978-81-7255-135-3, Editors, Dr Dixy B, DrSheeba P, SrFreny Jacob
- 2. ZoologieInnovante series 2: Nov 2021. Published by Sooryagatha (Publishers), Kochi 682035, pp-88, ISBN: 978-81-7255-147-6, Editors, Dr. Meera K M, Sr. FrenyJacob.

V. WORKSHOP ON STATISTICAL SOFTWARESFOR RESEARCH AND ETHICS IN RESEARCH

2019-2020

1. 27-02-2020: department organised a seminar on Ethics in scientific research and scientific article writing. 12 PG students participated in the programme. DrSlieesh M.S, Researcher and Freelance Scientific writer, School of Ocean Science and Technology, Kerala University of Fisheries and Ocean studies, Panagad was the Resource Person. He emphasised on the purpose of scientific writing in research and differences between scientific and science writing. He explained about Plagiarism, Journals (Both national and international), software's related to scientific writing. He also shared information about online sources for free E-books and Journals and also explained careers in research fields and jobs related to biological fields.

The session was highly informative and knowledge providing and also useful in higher studies. The program was useful to students and seminar was rated as successful by the participants.



2. Workshop on 'R' language training

2nd to 4th September 2019: In order to develop professional competency in research 'Workshop on R language training'- Hands on programme was organised for the I year PG students from 10 am to 2 pm,12 first year PG students participated.DrSlieesh M.S, Researcher and Freelance Scientific writer, School of Ocean Science and Technology, Kerala University of Fisheries and Ocean studies, Panagad was the Resource Person. He discussed on Introduction to R, Importance of R learning, The R Companions, R studio, Comprehensive R Archive Network (CRAN), Logistic regression, time series analysis, Future opportunities and higher level modelling applications of R, hands on training on the topic, 'Regression- logistic regression using R to enhance the skill and expertise of students in this area.

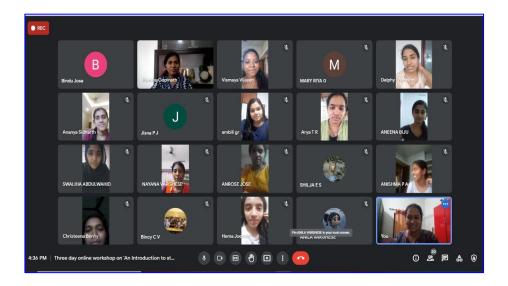




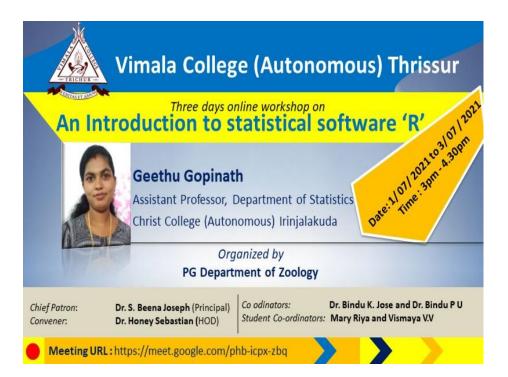
3. Workshop on Statistical Programming Software 'R'

01-07-2021 To 03-07-2021: Three Days Online Workshop On The Topic 'An Introduction To Statistical Programming Software 'R' Was Organised For PG Students. 21 First Year PG Students And 2 Faculty Members attended the programme

The resource person, gave an introduction on the 'R' software and its area of applications. The R Companions, R studio, Comprehensive R Archive Network (CRAN), Diagrammatic representation of data, The bar diagram, Pie diagram and histogram, correlation coefficients. Future opportunities and higher level modelling applications of R, hands on training on the topic 'Regression logistic regression using R was also done to enhance the skill and expertise of students in this area, Random number generation from normal distribution, parametric test, non parametric test, shapiro will test, paired t test, chi-square test, Anova, etc.



Webinar- participants photo, PG Department of Zoology, Vimala College (Autonomous)



Webinar brochure

Evidence of Success: all the activities listed under the title 'Student support programmes' have received a good feedback from the students. Students could gain extra knowledge and could develop a broad outlook in the realm of learning and research. Interaction with the meritorious alumnae helped them to gain confidence to move forward in the academics.

Problems Encountered and Resources Required: Fund is required for the publication of the books

Notes: Future plans-More student support programmes that enable the students to develop a research aptitude can be conducted in the coming years. Research scholars who have registered under the research guides of the department can be invited togive awareness programme for our students on the recent trends in biological research, various scholarships available for research, nationally and internationally recognised research institutions and mode of admission, workshop on research article/review article writing, Ethics in scientific research and publication. The orientation talks/lectures on motivation, development of self-confidence, stress management, improving communication skills and special methods of teaching which is the need of time are also planned to be organised.