

SCIENCE ACADEMIES' EDUCATION PROGRAMME

SEP/RC September/2016

23 May 2016

JOINT SCIENCE EDUCATION PANEL

Indian Academy of Sciences

Sebastian, K. L.
(Chairman)
Arunan, E.
Bachhawat, A. K.
Balakrishnan, V.
Chattopadhyay, Nitin
Dhar, Deepak
Mukunda, N.
Murthy, M.R.N.
Radhakrishnan, T. P.
Rangarajan, Govindan
Saidapur, S.K.
Sankaran, P.
Satheesh, S.K.
Sengupta, Pulak
Subramaniam,
Annapurni

Indian National Science Academy

Chattaraj, P. K.
Chattoo, B.B.
Chaudhuri, Probal
Goswami, J.N.

The National Academy of Sciences, India

Dimri, V.P.
Khurana, Paramjit
Misra, Gadadhar
Mittal, J.P.

Contact Address

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Refresher Courses &
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Indian Academy of
Sciences
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India

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Dr A. Madhusudhana Reddy
Asst. Professor
Dept. of Botany
Yogi Vemana University
Kadapa 516 003

Sub: Refresher Course on "Plant Taxonomy – Orthodox and Modern Aspects" at Yogi Vemana University, Kadapa from 15 – 29 September, 2016.

Dear Dr Reddy,

This has reference to the letter forwarding a proposal and budget for organizing a Refresher Course in Yogi Vemana University, Kadapa. The Joint Science Education Panel of the three Academies will be happy to sponsor and support the Refresher Course. We note that Prof. R.R. Rao (Bangalore) will be the Course Director and you will be the Course Co-ordinator.

- Your budget of Rs.7,75,250/- for 35 participants (inclusive of **travel expenses/boarding/lodging** for Resource Persons has been approved by the Science Education Panel.
- Please note that only the names of Convener and Coordinator of the Workshop should be included in brochure/invitation etc. Names of members of the management, organizing committees, patrons etc should be strictly avoided.**
- As the Refresher Course is an all India one, it has to be advertised in our journals **RESONANCE** and **CURRENT SCIENCE** (copy of a typical announcement is attached). Please send us a draft of your announcement.
- Applications should be submitted online through a link which will be available in our website. The Course Director and Coordinator will be provided a user-id/password to enable them to view the applications and make the selections.
- Refresher Courses are sponsored and supported by the three National Science Academies - IASc, INSA and NASI. The names of **INDIAN ACADEMY OF SCIENCES (BANGALORE)**, **INDIAN NATIONAL SCIENCE ACADEMY (NEW DELHI)** and **THE NATIONAL ACADEMY OF SCIENCES, INDIA (ALLAHABAD)** should therefore be mentioned in all publicity material such as programme sheet, invitation cards, etc.



Indian Academy
of Sciences,
Bangalore



Indian National
Science Academy,
New Delhi



The National Academy
of Sciences, India
Allahabad

- (f) The Course should be called "Science Academies' Refresher Course in "Plant Taxonomy – Orthodox and Modern Aspects".
- (g) Please send 4-5 copies of the printed programme when ready.
- (h) Funds for organizing the Course can be sent as an advance by electronic transfer. This can be sent after a bank account is opened and the following details are provided to us:
1. Name of the Bank;
 2. Name of the Branch;
 3. Account No.;
 4. Name of the Account Holder
(in the name of Refresher Course);
 5. IFSC – code (for Non-SBI accounts)

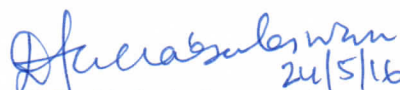
If necessary, an authorization letter from the Academy to the bank to open the Savings Bank account can be sent to you after we hear from you.

- (i) The audited expenditure statement/utilization certificate duly signed by competent authority (CA or Financial Controller) to be sent along with the report, once the Course is over. This is required for the Audit compliance.
- (j) A CD containing the resource materials has to be made available at the Academy website. The Academy would like to make the educational material made for the course available to a large audience at its website, Hence a CD containing the material (without infringement on the copyright issues) has to be made available by the course director to the Academy.

Please go ahead with organizing the Course in consultation with Professor R.R. Rao and keep in touch with the Academy about the progress.

Best wishes,

Yours sincerely,

 24/5/16

T. D. Mahabaleswara
Coordinator (LW/RC)
Science Education Panel

SCIENCE ACADEMIES' EDUCATION PROGRAMME

JOINT SCIENCE EDUCATION PANEL

SEP/LW/January/2016

07 December 2015

Dr A. Madhusudhana Reddy
Asst. Professor
Dept. of Botany
Yogi Vemana University
Vemanapuram
Kadapa 516 003

Sub: Lecture Workshop on "Trends in Plant Taxonomy" at Yogi Vemana University, Kadapa (21-22 January 2016).

Dear Dr Reddy,

This has reference to your letter dated 03 December 2015 forwarding a revised proposal and budget for organizing a two-day Lecture Workshop in your College. The Joint Science Education Panel of the three Academies will be happy to sponsor and support the Lecture Workshop. We note that Professor R.R. Rao (Bangalore) will be the Workshop Convener and that you will be the Workshop Co-ordinator.

(a) Your budget of Rs 1,25,500/- for 150 participants (inclusive of **travel expenses** for Resource Persons) has been approved by the Science Education Panel.

(b) Please note that only the names of Convener and Coordinator of the Workshop should be included in brochure/invitation etc. **Names of members of the management, organizing committees, patrons etc should be strictly avoided.**

(c) **Please ensure that the expenditure on individual items does not exceed the sanctioned budget. If the actual expenditure exceeds the sanctioned budget, the host institution should take care of the difference.**

(d) Lecture Workshops are sponsored and supported by the three National Science Academies – IASc, INSA and NASI. The names of INDIAN ACADEMY OF SCIENCES (BANGALORE), INDIAN NATIONAL SCIENCE ACADEMY (NEW DELHI) and THE NATIONAL ACADEMY OF SCIENCES, INDIA (ALLAHABAD) should therefore be mentioned in all publicity material such as programme sheet, invitation cards, etc.

(e) **It may be noted that no formal certificates should be issued to participants.** A letter of attendance signed by Coordinator may be issued to those who need it.

(f) The Workshop should be called Science Academies' Lecture Workshop in "Trends in Plant Taxonomy".

Indian Academy of Sciences

Sebastian, KL
(Chairman)
Ramaraj, R
Samanta, A
Arunan, E

Murthy, MRN
Saidapur, SK

Chattopadhyay,
Dhrubajyoti

Lakshmanan, M

Raghunathan, VA

Dhar, Deepak

Mandal, Nibir

Vinayachandran, PN

Sankaran, P

Rangarajan, G

Indian National Science Academy

Dogra, SK

Muralidhar, K

Gupta, Alok K

Passi, IBS

The National Academy of Sciences, India

Dimri, Vijay Prasad

Gupta, Santosh Kumar

Khurana, Paramjit

Misra, Gadadhar

Contact Address

Mahabaleswara, TD

Coordinator

Refresher Courses &

Lecture Workshops

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Indian Academy
of Sciences,
Bangalore



Indian National
Science Academy,
New Delhi



The National Academy
of Sciences, India
Allahabad

(g) You should send us three copies of the printed programme cards once it is printed.

(h) We can advance money by electronic transfer on a specific request from you. We will need the following bank details:

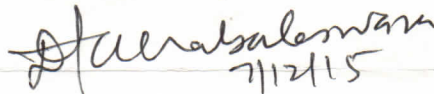
1. Account No;
2. Name of the Account Holder;
3. Name of the Bank;
4. Name of the Branch;
5. IFS code for non-SBI accounts.

(i) The audited expenditure statement/utilization certificate duly signed by competent authority (CA or Financial Controller) to be sent along with the report, once the Course is over. This is required for the Audit compliance.

You can go ahead with organizing the Workshop in consultation with Professor R.R. Rao and keep in touch with us about the progress.

With regards,

Yours sincerely,



T D Mahabaleswara
Coordinator (Lecture Workshop/Refresher Course)
Science Education Panel

REPORT ON

A Two weeks “Science Academies Refresher Course’ in “Plant Taxonomy-Orthodox and modern aspects” (October 18 - 31, 2016)

Sponsored by

**Indian Academy of Sciences, Bangalore.
Indian National Science Academy, New Delhi.
The National Academy of Sciences India, Allahabad**



Organized by

**DEPARTMENT OF BOTANY
YOGI VEMANA UNIVERSITY
VEMANAPURAM
KADAPA-516003**



www.yogivemanauniversity.ac.in



Course Director

Dr. R. R. Rao

Course Co-ordinator

Dr. A. Madhusudhana Reddy



WELCOME TO
A Two weeks “Science Academies Refresher Course’ in
“Plant Taxonomy-Orthodox and modern aspects”
(October 18 - 31, 2016)



Theme of The Refresher Course With Eco Friendly Decoration

Distribution of Refresher Course kit to the Participants





Group Photo

A report on

A Two weeks 'Science Academies Refresher Course' in "Plant Taxonomy-Orthodox and modern aspects" (October 18 - 31, 2016)

Preamble

Two-week Refresher Courses form an important segment of the activities of the Science Academies' Programmes organized by the Joint Science Education Panel of the three Science Academies. The primary focus is to enhance the quality of science education at undergraduate and graduate levels. Refresher Courses are thus primarily aimed at helping teachers to add value to their teaching. The Course content thus needs to be designed to meet the above need. While discussion of modern areas of topical interest is important, the Course should be so designed as to have direct relevance to the materials covered in the graduate and undergraduate curricula in universities and institutions in the country and are not necessarily meant to be at an advanced research level.

Goal of the Refresher Course: To provide better insights to the UG & PG teachers working in life science departments from various universities and degree colleges on the latest trends and emerging fields of research in “Plant Taxonomy-Orthodox and modern aspects”.

Objectives Course: The objective of this program is to learn and promote the interaction between scientists, researchers, professors and teachers in Plant Taxonomy. To bring fellows of national academies, faculty from various institutions on to a common platform to discuss orthodox and modern aspects in plant taxonomy. The participants of the program will collaborate to identify and tackle some of the most important theoretical and practical challenges arising from plant taxonomy. To update life science faculty on latest developments in plant taxonomy for better teaching in UG & PG level.

Participants: In reference with refresher course announcement total 80 applicants (Teachers UG & PG and Scientists) from various Universities, Degree colleges, Research institutions has been registered. The selection committee has selected 35 participants from all over India from various institutions to participate in the refresher course on A Two weeks ‘Science Academies Refresher Course’ in “Plant Taxonomy-Orthodox and modern aspects” (October 18 - 31, 2016).

Inviting Chief Guests and Dignitaries on to the dias by Prof. P. S. Sha Valli Khan





Inaugurating the Refresher Course shop by The Guests



Invocation

ABSTRACT OF THE REFRESHER COURSE

A Two weeks 'Science Academies Refresher Course' in "Plant Taxonomy-Orthodox and modern aspects" (October 18 - 31, 2016). Sponsored by Indian Academy of Sciences, Bangalore. Indian National Science Academy, New Delhi. The National Academy of Sciences India, Allahabad. Organized by Department of Botany, Yogi Vemana University, Kadapa, Andhra Pradesh, India. The course Director is Dr. R. R. Rao and the course coordinator is Dr. A. Madhusudhana Reddy. The course announcement has published in Current Science, Resonance and print media nationwide and also the announcement has circulated to colleges and universities. The course received 80 online applications from all over India. The selection committee has selected 35 participants from various institutions. A total of 11 resource persons have delivered lectures and tutorials on basic and modern aspects of plant taxonomy. During the course a total of 52 sessions were conducted including lectures, tutorials, practical's, group discussions and field oriented classes for plant identification.

Topics covered in the course, all areas of traditional and modern aspects of taxonomy including molecular taxonomy. Galapagos Island and Darwin's theory of evolution'. In brief, History of plant taxonomy, Plant classification system, APG IV, Current problems in taxonomy teaching and research in Universities, Changing trends in plant taxonomy, Botanical Nomenclature, Phytogeography and Plant taxonomy, Species concept and population concept, How to write monographs and revisions, Botanical Keys for identification of plants, Concept and development of Herbarium, functions of a herbarium, Taxonomic literature, Biodiversity in India; Cytotaxonomy, Chemotaxonomy, and many other related topics lichens, bryophytes, taxonomy and ethonobotany, Role of taxonomy in Medicinal Plants and Drug Discovery, global convention on biodiversity taxonomy and conservation of biological diversity, pollen biology, Relevance of Higher plants to drug discovery and Biodiversity Conservation and bio fuels.

Practical's classes conducted in the afternoon after the lecture schedules. The practical classes include lessons on how to describe a plant, how to identify a plant, how to classify the plants, nomenclature, how to prepare herbarium specimens, how to write Floras, how to write monographs, checklists, how to handle the specimens and all other associated exercises. Practical also conducting related to molecular taxonomy, chemotaxonomy and other allied branches

Field tours are arranged on two days, one day at Seshachalam Biosphere Reserve (17 biosphere reserve in India), Palakonda hills and one Sunday acquainted with campus flora and two sessions

conducted in YVU Botanical Garden. Trained in collection, identification and description of plants etc. Each participant would be provided with a hand lens for identification work.

Refresher Course manual: The coordinator collected write up of all lectures for the Manual from resource persons. The write up of all lectures and demonstrations prepared in a CD and distributed to participants in the end of the course. In the beginning of the course two books related to plant taxonomy and Xerox material distributed to all participants.

Last before day we conducted examination to participants covering in all accepts. The participants have secured 70 to 95 % of marks. The course concluded with feedback from participants and certificates distribution in valedictory function. All the participants have appreciated science academies and organizers for organizing the refresher course in plant taxonomy and all participants are suggested that next time organize the field and lab oriented course in plant taxonomy.

Inaugural Session: The refresher course was initiated with distribution of course kit (bag, note pad, pen and course material) for 35 selected participant's on 18th October 2016 in-between 9.00 am to 10.00 am. As customary we are having brief inaugural sections to starts this a two weeks Science Academies refresher course on "Plant Taxonomy-Orthodox and modern aspects". The programme started at sharply at 10.00 am with a warm welcome by Prof. P. S. Shavalli Khan, Professor of Botany, Yogi Vemana University, Kadapa. He invited all dignitaries on to the dais Dr. R. R. Rao (Course Director), Prof. Srinivas K. Saidapur (Special guest), Prof. K. R. Shivanna (Guest of Honor), Prof. K. Satyanarayana Reddy, Principal of the YVU College, Prof. Y. Nazeer Ahammed, Registrar i/c, Yogi Vemana University and Dr. A. Madhusudhana Reddy, Course Coordinator. The programme has hand over to Course Coordinator to preside the programme. The programme started with lighting of lamp with dignitaries on the dais followed Invocation song by students.

Dr. R. R. Rao, Course Director has highlighted that the various programmes sponsored by the science academies. He gave a brief history about Indian Science Academies. He clearly explained the role of science academies in promoting strong science platform in universities and colleges by sponsoring various programmes like Summer Research Fellowships for students and faculties to learn the advanced research, Refresher Courses for faculties on contemporary topics, refresher course to listen and interact with the scientific fellows to improve their knowledge and

Inaugural Session



Prof. S.K. Saidapur Formar Vice-Chancellor, addressing the Inaugural Session



Message by Dr. R.R.Rao



Message by Prof. K.R. Sivanna



Message BY Dr. A.M.Reddy Course Coordinator



Message by Prof. Y. Nazeer Ahammad

Introduction of Participants



skills. He also pointed out the 4 journals that are published by the science academies. Dr. Rao mentioned that now a day's plant taxonomy is in crisis due to shortage of trained taxonomist and there is no good plant taxonomy teaching faculty in colleges. This is the time for train the plant taxonomist for teaching and plant identification in the field and lab. This is the good platform for learning of plant taxonomy. Dr. Rao finally emphasized the importance of the course and how to utilize the course material for teaching purpose. Prof. Srinivas K. Saidapur, Chief Guest of the today inaugural function has clearly mentioned that the evolution of science and technology in everyday aspects especially in the field of plant Taxonomy. Prof. K. R. Shivanna , Honorary Senior Fellow, ATREE, Bangalore., has stated that the course importance and he motivated the participants has about biodiversity conservation.

Prof. K. Satyanarayana Reddy, Principal, Yogi Vemana University College has mentioned about the University courses and importance of the course. Prof. Y. Nazeer Ahammed, Registrar, has explained role of refresher course in teaching and learning process. Also he has appreciated the all Science academies that are sponsored the 2 weeks refresher course to Y. V. University. In the end of the inaugural section the Course Coordinator Dr. A. Madhusudhana Reddy has given brief idea about the course, practical's and field oriented classes during the course. The inaugural function end with introduction of participants and vote thanks by Dr. P. Chandra Obul Reddy, Assistant Professor, Department of Botany.

Followed by the felicitations, Group photo and Tea Break

18 -10-2016 TUESDAY DAY-1: The first session for the day was chaired by Prof. K. R. Shivanna, has delivered lecture on 'Galapagos Island and Darwin's theory of evolution'. In the second session Prof. S. K. Saidapur talked on 'Evolution' (Idea of Evolution). The second session started with 'Ethno botany related to new branches' by Dr. R. R. Rao and the second session end with 'Biodiversity and its Significance' by Dr. R. R. Rao.

19 -10-2016 WEDNESDAY DAY-2: The first session started with wonderful lecture on 'Power of Evolution' by Prof. S. K. Saidapur and the session end with 'Conservation of plant diversity/why they are hardly any success stories in our country' by Prof. K. R. Shivanna. In the second session Dr. R. R. Rao has delivered two lectures first lecture on 'The Herbarium, its concepts and functions and current problems in management' and the second lecture on 'The Herbarium and its Making'

Lectures by the Resource persons



Dr. R.R.Rao



Dr. M.Sanjappa



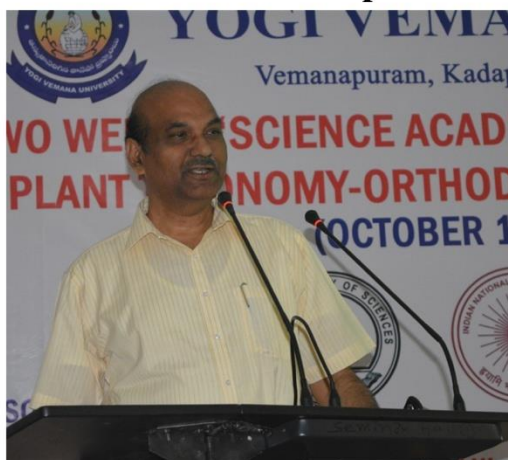
Prof. K.R. Sivanna



Prof. S. K. Saidapur



Prof. M. N .V. Prasad



Prof. Attipalli R. Reddy

20 -10-2016 THURSDAY **DAY-3:** The four sessions engaged by Dr. R. R. Rao and he delivered on four topics; why frequent changes in botanical names? Some aspects of Botanical nomenclature, Taxonomic literature, Methods and techniques of ethnobotanical study and research and Biodiversity hotspots.

21 -10-2016 FRIDAY **DAY-4:** The session started with Distribution of plants in space and time and Acts and international conventions in relations environment and wild life in India by Prof. Rama Krishna. Pollination biology – the driving force behind the origin and evolution of Angiospermic flowers and Changing trends in taxonomy orthodox vs modern change in species and speciation by Dr. R .R. Rao.

22 -10-2016 SATURDAY **DAY-5:** Prof. M N V Prasad was delivered lectures on Plant Taxonomy as an Interface Between Low and High tech Science and Plant Molecular Systematics. In the afternoon sessions he conducted practical on Molecular taxonomy , DNA Isolation from cauliflower

23 -10-2016 SUNDAY **DAY-6:** Dr. A. M. Reddy conducted field studies and tutorials on enumeration of campus flora, Tutorials on Herbarium Preparation and Description of Angiosperm plants.

24 -10-2016 MONDAY **DAY-7:** The first two sessions by Prof. T. Pullaiah delivered lectures on APG-4 System of classification and Taxonomy of Bryophytes. The afternoon two sessions conducted Practical's on Identification of Lichens and Preparation of Lichen Herbarium by Dr. A. M. Reddy.

25 -10-2016 TUESDAY **DAY-8:** Prof. A. R. Reddy delivered a lecture on Bio fuels. Prof. R. R. V. Raju delivered two lectures on Biosystematics History, Scope and objectives AND Role of Biosystematics in understanding evolution. The last session by Dr. A. M. Reddy conducted Practicals on: Identification of Grasses.

26 -10-2016 WEDNESDAY **DAY-9:** The first session started with 'The impact of Heat stress on Male Gametophyte of flowering plants in the contest of climate change' by Prof. P. S. Shavalli Khan. The second lecture on 'Relevance of Higher plants to drug discovery and Biodiversity Conservation: End of an era or an Endless Frontier?' by Prof. A. G. Damu. Tutorials on Identification of trees at YVU Botanical Garden and Identification of Herbs at YVU Botanical Garden by Dr. A. M. Reddy.

Field Tour at YVU Botanical Garden



Plants explained by Dr. A. Madhusudhana Reddy, Course Coordinator.

Field Tour at Seshachalam Biosphere Reserve



Plants explained by Dr. A. Madhusudhana Reddy, Course Coordinator.

Practicals- Tutoriels-Exam



**Conducted by Dr.R.R.Rao, Dr.M.Sanjappa, Prof.M.N.V.Prasad
and Dr. A. Madhusudhana Reddy, Course Coordinator.**

27 -10-2016 THURSDAY DAY-10: Engaged 4 session in the field: Field trip conducted at Seshachalam Biosphere Reserve forests and Palakonda forests. Explained about 120 forest plants and its characters for easy identification. The endemic plants like *Pterocarpus santalinus*, *Croton scabiosus* etc. by Dr. A. M. Reddy

28 -10-2016 FRIDAY DAY-11: The first two sessions on ‘Floristic diversity of India an overview’ and ‘Cytotaxonomical investigation in the genus Chlorophytum from India’ by Dr. M. Sanjappa. Third session on ‘Chemotaxonomy’ by Dr. R. R. Rao. Last session practicals on ‘Fluorescence Microscopy: Pollen Viability and Pollen Developmental stages’ by Prof. P. S. Shavalli Khan.

29 -10-2016 SATURDAY DAY-12: Dr. M. Sanjappa delivered a lecture on ‘History of Taxonomy Research in India and the role of BSI in Taxonomy Research’ and ‘Some emerging challenges in contemporary botanical science with vascular plants’ by Dr. R. R. Rao. Tutorials: Assessment test; Objective type questions covering all aspects of taxonomy; 50 questions each carrying 2 marks by Dr. A. M. Reddy. Practical conducted on Identification and Nomenclature by Dr. R. R. Rao.

30 -10-2016 SUNDAY DAY-13 (DIWALI CELEBRATIONS)

31 -10-2016 MONDAY DAY-14: Practical’s conducted on Description & classification & botanical keys of Plants by Dr. M. Sanjappa and Description & classification & botanical keys of Plants by Dr. R. R. Rao. Practical on Preparation of keys Dr. M. Sanjappa. Tutorials: In the interactive session all participants are interacted with all resource persons asking several queries. Discussion on assessment test and Valedictory function by Dr. R.R. Rao and Dr. A.M. Reddy.

Valedictory programme: The programme was ended with Valedictory Session with report presentation by Dr. A. Madhusudhana Reddy, Course Coordinator. Valedictory address by Dr. R. R. Rao, Course Director, INSA Honorary Scientist, Bangalore and the vote of thanks was delivered by the course coordinator.

The overall feedback is about the refresher course from all participants are well appreciated the all science academies for sponsoring this kind of programme and organizers and expressed that the teachers required 2 week training programme in the present theme. Then the course director Dr. R. R. Rao has promised that I will bring to the notice of science academies. In the end the course director and course coordinator are felicitated by all participants.

Feed back by the Participants



Valedictory Programme on 31-10-2016



Report presentation by Dr. A.Madhusudhana Reddy



**Valedictory address by
Dr. R. R. Rao,**



**Valedictory address by
Dr. M.Sanjappa**

Felicitation to Resource Persons



To Prof. A.R.Reddy, VC, YVU



To Dr.R.R.Rao



To Prof. K.Saidapur



To Dr.A.M.Reddy



To Prof.K.R.Shivanna



To Prof.Y.Nazeer Ahammad



To Prof. K.Satyanarayana Reddy



To Prof. P.Shavalli Khan

THE DETAILED PROGRAMME OF THE COURSE

Date & Time	Programme	Resource Persons
18-10-2016	TUESDAY Day-1	
09.00 - 10.00 am	Registration	
10.00 - 11.00 am	Inauguration	
11.00 - 11.10 am	Tea Break	
11.10 - 12.20 pm	Galapagos Island and Darwin's theory of evolution	Prof. K. R. Shivanna
12.20 - 1.30 pm	Evolution (Idea of Evolution)	Prof. S. K. Saidapur
1.30 - 2.20 pm	Lunch Break (Guest House)	
2.20 - 3.50 pm	Ethno botany related to new branches	Dr. R. R. Rao
3.50 - 4.00 pm	Tea Break	
4.00 - 5.30 pm	Biodiversity and its Significance	Dr. R. R. Rao
19-10-2016	WEDNESDAY Day-2	
09.30 - 11.00 am	Power of Evolution	Prof. S. K. Saidapur
11.00 - 11.10 am	Tea Break	
11.10 - 12.40 pm	Conservation of plant diversity/why they are hardly any success stories in our country	Prof. K. R. Shivanna
1.00 - 2.00 pm	Lunch Break (Guest House)	
2.00 - 3.30 pm	The Herbarium, its concepts and functions and current problems in management;	Dr. R. R. Rao
3.30 - 3.40 pm	Tea Break	
3.40 - 5.10 pm	The Herbarium and its Making	Dr. R. R. Rao
20-10-2016	THURSDAY Day-3	
09.30 - 11.00 am	Why frequent changes in botanical names? Some aspects of Botanical nomenclature	Dr. R. R. Rao
11.00 - 11.10 am	Tea Break	
11.10 - 12.40 pm	Taxonomic literature	Dr. R. R. Rao
1.00 - 2.00 pm	Lunch Break (Guest House)	
2.00 - 3.30 pm	Methods and techniques of ethnobotanical study and research	Dr. R. R. Rao
3.30 - 3.40 pm	Tea Break	

3.40 - 5.10 pm	Biodiversity hotspots	Dr. R. R. Rao
21-10-2016	FIRDAY Day-4	
09.30 - 11.00 am	Distribution of plants in space and time	Prof. Rama Krishna
11.00 - 11.10 am	Tea Break	
11.10 - 12.40 pm	Acts and international conventions in relations environment and wild life in India	Prof. Rama Krishna
1.00 - 2.00 pm	Lunch Break (Guest House)	
2.00 - 3.30 pm	Pollination biology – the driving force behind the origin and evolution of Angiospermic flowers	Dr. R. R. Rao
3.30 - 3.40 pm	Tea Break	
3.40 - 5.10 pm	Changing trends in taxonomy orthodox vs modern change in species and speciation	Dr. R.R. Rao
22-10-2016	SATURDAY Day-5	
09.30 - 11.00 am	Plant Taxonomy as an Interface Between Low and High tech Science	Prof. M N V Prasad
11.00 - 11.10 am	Tea Break	
11.10 - 12.40 pm	Plant Molecular Systematics	Prof. M N V Prasad
1.00 - 2.00 pm	Lunch Break (Guest House)	
2.00 - 3.30 pm	Practical: Molecular taxonomy	Prof. M N V Prasad
3.30 - 3.40 pm	Tea Break	
3.40 - 5.10 pm	Practical: DNA Isolation from cauliflower	Prof. M N V Prasad
23-10-2016	SUNDAY Day-6	
09.30 - 11.00 am	Enumeration of campus flora	Dr. A. M. Reddy
11.00 - 11.10 am	Tea Break	
11.10 - 12.40 pm	Identification campus flora	Dr. A. M. Reddy
1.00 - 2.00 pm	Lunch Break (Guest House)	
2.00 - 3.30 pm	Tutorials : Herbarium Preparation	Dr. A. M. Reddy
3.30 - 3.40 pm	Tea Break	
3.40 - 5.10 pm	Description of Angiosperm plants	Dr. A. M. Reddy
24-10-2016	MONDAY Day-7	
09.30 - 11.00 am	APG-4 System of classification	Prof. T. Pullaiah

11.00 - 11.10 am	Tea Break	
11.10 - 12.40 am	Taxonomy of Bryophytes	Prof. T. Pullaiah
1.00 - 2.00 pm	Lunch Break (Guest House)	
2.00 - 3.30 pm	Practical's: Identification of Lichens	Dr. A. M. Reddy
3.30 - 3.40 pm	Tea Break	
3.40 - 5.10 pm	Preparation of Lichen Herbarium	Dr. A. M. Reddy
25-10-2016	TUESDAY Day-8	
09.30 - 11.00 am	Bio fuels	Prof. A. R. Reddy
11.00 - 11.10 am	Tea Break	
11.10 - 12.40 Pm	Biosystematics History, Scope and objectives	Prof. R.R.V. Raju
1.00 - 2.00 pm	Lunch Break (Guest House)	
2.00 - 3.30 pm	Role of Biosystematics in understanding evolution	Prof. R.R.V. Raju
3.30 - 3.40 pm	Tea Break	
3.40 - 5.10 pm	Practical : Identification of Grasses	Dr. A. M. Reddy
26-10-2016	WENSDAY Day - 9	
09.30 - 11.00 am	The impact of Heat stress on Male Gametophyte of flowering plants in the contest of climate change	Prof. P. S. Shavalli Khan
11.00 - 11.10 am	Tea Break	
11.10 - 12.40 pm	Relevance of Higher plants to drug discovery and Biodiversity Conservation: End of an era or an Endless Frontier ?	Prof. A. G. Damu
1.00 - 2.00 pm	Lunch Break (Guest House)	
2.00 - 3.30 pm	Tutorial : Identification of trees at YVU Botanical Garden	Dr. A. M. Reddy
3.30 - 3.40 pm	Tea Break	
3.40 - 5.10 pm	Tutorial : Identification of Herbs at YVU Botanical Garden	Dr. A. M. Reddy
27-10-2016	THURSDAY Day - 10 Filed study	
08-30 am To 5-00 pm	Engaged 4 session: Field trip conducted at Seshachalam Biosphere Reserve forests. Explained about forest plants and its characters for easy identification	Dr. A. M. Reddy

28-10-2016	FRIDAY Day-11	
09.30 - 11.00 am	Fluorescence Microscopy: Pollen Viability and Pollen Developmental stages	Prof. P. S. Shavalli Khan
11.00 - 11.10 am	Tea Break	
11.10 - 12.40 pm	Floristic diversity of India an overview	Dr. Sanjappa
1.00 - 2.00 pm	Lunch Break (Guest House)	
2.00 - 3.30 pm	Cytotaxonomical investigation in the genus Chlorophytum from India	Dr. Sanjappa
3.30 - 3.40 pm	Tea Break	
3.40 - 5.10 pm	Chemotaxonomy	Dr. R. R. Rao
29-10-2016	SATURDAY Day-12	
09.30 - 11.00 am	History of Taxonomy Research in India and the role of BSI in Taxonomy Research	Dr. Sanjappa
11.00 - 11.10 am	Tea Break	
11.10 - 12.40 am	Some emerging challenges in contemporary botanical science with vascular plants.	Dr. R. R. Rao
1.00 - 2.00 pm	Lunch Break (Guest House)	
2.00 - 3.30 pm	Tutorials: Assessment test; Objective type questions covering all aspects of taxonomy; 50 questions each carrying 2 marks.	Dr. A.M. Reddy
3.30 - 3.40 pm	Tea Break	
3.40 - 5.10 pm	Practicals: Identification and Nomenclature	Dr. R. R. Rao
30-10-2016	SUNDAY Day-13 (DIWALI CELEBRATIONS)	
31-10-2016	MONDAY Day-14	
09.30 - 11.00 am	Practical : Description & classification & botanical keys of Plants	Dr. Sanjappa
11.00 - 11.10 am	Tea Break	
11.10 - 12-40 pm	Practical : Description & classification & botanical keys of Plants	Dr. R. R. Rao
1.00 - 2.00 pm	Lunch Break (Guest House)	
2.00 - 3.30 pm	Practical: Preparation of keys	Dr. Sanjappa
3.30 - 3.40 pm	Tea Break	
3.40 - 5-30 pm	Tutorials: Discussion on assessment test and Valedictory function	Dr. R.R. Rao Dr. A.M. Reddy
	High tea and disperse	

List of Resource persons

S.No.	Name of the Resource Person	Designation & Address
1	Dr. R. R. RAO, FNA	INSA Honorary Scientist, Bangalore
2	Prof. K. R. Shivanna	Honorary Senior Fellow, ATREE, Bangalore
3	Dr. Srinivas K. Saidapur	Director, Higher Education Academy, Karnatak University, Dharwad
4	Dr. M. Sanjappa	CSIR Emeritus Scientist, GKVK, Bangalore
5	Prof. Ramakrishna	Former Director, Zoological Survey of India
6	Prof. A. R. Reddy	Vice-Chancellor, Yogi Vemana University, Kadapa.
7	Prof. M.N.V. Prasad	Professor, Dept. of Plant Science, University of Hyderabad, Hyderabad.
8	Prof. T. Pullaiah	Former Professor, Dept. of Botany, S.K. University, Anantapur (living in Bangalore)
9	Prof. R. R. V. Raju	Professor, Department of Botany, S.K. University, Anantapur
10	Prof. P. S. Shavalli Khan	Professor, Dept. of Botany, YVU, Kadapa
11	Prof. A. G. Damu	Professor, Dept. of Chemistry, YVU
12	Dr. A. M. Reddy	Course Coordinator, Dept. of Botany, YVU

List of Participants

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పరిశోధనలకు ఉపయుక్తం



జోశి ప్రజ్ఞాని చేస్తున్న శాస్త్రవేత్తలు, మాట్లాడుతున్న, సీనియర్ శాస్త్రవేత్త అధ్యాపక శిష్యులు, పూర్వపు ఉపకులపతి శ్రీనివాసరెడ్డి

జిల్లా సచివాలయం, న్యూస్ టుడే: విశ్వవిద్యాలయంలో చేపట్టిన రెఫ్రెషర్ కోర్సులకు ఉపయుక్తంగా ఉండాలని అప్పటి సూతన పోకడలు తెలుసుకునే అవకాశం ఉంటుంది పలువురు వ్యక్తులు పేర్కొన్నారు. యోగి వేమన విశ్వవిద్యాలయంలోని వ్యక్తశాస్త్ర విభాగంలో మంగళవారం నుంచి రెండు వారాల పాటు జరిగే రెఫ్రెషర్ కోర్సు సమన్వయకర్త డాక్టర్ మహనూదన్ రెడ్డి ఆధ్వర్యంలో ప్రారంభమైంది. ముఖ్య అతిథులుగా హోజరైన కర్ణాటక విశ్వవిద్యాలయం పూర్వపు ఉపకులపతి అచార్య శ్రీనివాసరెడ్డి, జెంగుళూరు సైన్స్ అకాడమీ గౌరవ శాస్త్రవేత్త డా. ఆర్. ఆర్. రావు ప్రసంగిస్తూ పరిశోధనకు కావాల్సిన పూర్తి సమాచారం ఇవ్వడంలో లభిస్తుందన్నారు. అలాంటి సందర్భాలు అధ్యాపకులు, స్టూడెంట్లకు ఎంతో మేలు చేస్తాయన్నారు. వ్యక్తశాస్త్రం



అతివారతనమైంది మొట్టొక గుర్తింపు. నామకరణం వాటి విస్తరణ తదితర అంశాల గురించి తెలుసుకునే అవకాశం ఉంటుందన్నారు. రిజిస్ట్రార్ సజీబ్ అహ్మద్ మాట్లాడుతూ అర్బుల్లో హుదుతున్న అంశమేనా విద్యార్థులు, అధ్యాపకులు, స్టూడెంట్లకు ఉపయోగపడే ఇలాంటి సందర్భాలు నిర్వహించడం అభినందనీయమన్నారు. అనంతరం అచార్య శిష్యులు జీవ పరిణామ సిద్ధాంతం గురించి వివరించగా, అచార్య శ్రీనివాస రెడ్డివారి పరిణామం గురించి ఆరంభించాడు వ్యక్తశాస్త్ర వ్యక్తశాస్త్రం సంప్రదాయాలు, సూతన పోకడల గురించి వివరించారు. కార్యక్రమంలో వివిధ రాష్ట్రాల నుంచి వచ్చిన అధ్యాపకులతో పాటుగా ప్రధానాచార్యులు డా. సత్యనారాయణరెడ్డి, వ్యక్తశాస్త్ర అధ్యాపకులు అచార్య పాపేశ్వరి, డా. చంద్ర ఓబిల్ రెడ్డి, పరిశోధక విద్యార్థులు పాల్గొన్నారు.

రెఫ్రెషర్ కోర్సులు ఎంతో ఉపయుక్తం



విశ్రాంత వైన చాన్సలర్ అచార్య శ్రీనివాస

వేమనూ రెఫ్రెషర్ కోర్సులు అచార్య వేమన అంతో ఉపయోగపడతాయని కర్ణాటక విశ్వవిద్యాలయం విశ్రాంత వైన చాన్సలర్ అచార్య శ్రీనివాస రెడ్డి అభిప్రాయం వ్యక్తం చేశారు. అచార్య శ్రీనివాస రెడ్డి అధ్యక్షులుగా పనిచేసిన రెఫ్రెషర్ కోర్సులకు ఉపయుక్తంగా ఉండాలని అప్పటి సూతన పోకడలు తెలుసుకునే అవకాశం ఉంటుంది పలువురు వ్యక్తులు పేర్కొన్నారు. యోగి వేమన విశ్వవిద్యాలయంలోని వ్యక్తశాస్త్ర విభాగంలో మంగళవారం నుంచి రెండు వారాల పాటు జరిగే రెఫ్రెషర్ కోర్సు సమన్వయకర్త డాక్టర్ మహనూదన్ రెడ్డి ఆధ్వర్యంలో ప్రారంభమైంది. ముఖ్య అతిథులుగా హోజరైన కర్ణాటక విశ్వవిద్యాలయం పూర్వపు ఉపకులపతి అచార్య శ్రీనివాసరెడ్డి, జెంగుళూరు సైన్స్ అకాడమీ గౌరవ శాస్త్రవేత్త డా. ఆర్. ఆర్. రావు ప్రసంగిస్తూ పరిశోధనకు కావాల్సిన పూర్తి సమాచారం ఇవ్వడంలో లభిస్తుందన్నారు. అలాంటి సందర్భాలు అధ్యాపకులు, స్టూడెంట్లకు ఎంతో మేలు చేస్తాయన్నారు. వ్యక్తశాస్త్రం



జోశి ప్రజ్ఞాని చేస్తున్న, అతిథులు

గురించి వివరించారు. వ్యక్తశాస్త్ర అధ్యాపకులు అచార్య పాపేశ్వరి, చంద్ర ఓబిల్ రెడ్డి, అధ్యాపకులు, విద్యార్థులు పాల్గొన్నారు.

ఆధునిక పోకడలను అందిస్తున్న కోవాలి

రెఫ్రెషర్ కోర్సు ముగింపు సమావేశంలో కోర్సు డైరెక్టర్ ఆర్.ఆర్. రావు

వైవీయూ : అధ్యాపకులు, పరిశోధకులు ఎప్పటికప్పుడు పరిశోధన రంగంలో వస్తున్న ఆధునిక పోకడలను అందిస్తున్న కోవాలిని అవసరం ఉందని ఇండియన్ ఆకాడమీ ఆఫ్ సైన్సెస్ గౌరవ శాస్త్రవేత్త డాక్టర్ ఆర్.ఆర్. రావు పేర్కొన్నారు. యోగివేమన విశ్వవిద్యాలయంలో 14 రోజులుగా నిర్వహిస్తున్న 'సైన్స్ అకాడమీ రిఫ్రెషర్ కోర్సు' ముగింపు సమావేశం సోమవారం నిర్వహించారు. ఈ కార్యక్రమానికి హాజరైన

ఆర్.ఆర్. రావు మాట్లాడుతూ వైవీయూలో నిర్వహించిన ఈ కోర్సుకు వివిధ రాష్ట్రాలకు చెందిన అధ్యాపకులు, పరిశోధకులు విచ్చేసి చక్కటి శిక్షణ పొందారన్నారు. ఈ కోర్సుల ద్వారా ఎప్పటికప్పుడు పరిజ్ఞానం, నైపుణ్యాలను మెరుగుపరుచుకోవచ్చని సూచించారు. కోర్సు కో-ఆర్డినేటర్ డాక్టర్ మధుసూదన్ రెడ్డి మాట్లాడుతూ ఈ రెఫ్రెషర్ కోర్సుకు వివిధ రంగాల నిపుణులు హాజరై చక్కటి అంశాలను వివరించారని పేర్కొ



న్నారు. ఈ కోర్సులో భాగంగా ప్రయోగపరీక్షలు, క్షేత్రపర్యటనలు నిర్వహించామని పేర్కొన్నారు. కార్యక్రమంలో అధ్యాపకులు, పరిశోధకులు పాల్గొన్నారు.

నాక్కి Tue, 01 November 2016 epaper.sakshi.com/c/14416798

8 స్థానికం

సెలెక్షన్లు | బుధవారం | నాక్కి

అక్టోబర్ 26 | 2016

విజ్ఞానాన్ని అర్థించే చక్కటి వేదిక...

విజ్ఞానాన్ని పెంపొందించుకునేందుకు చక్కటి వేదిక రెఫ్రెషర్ కోర్సు లాంటి శాస్త్రవేత్తల నిర్వహిస్తున్న ఈ కోర్సు వలన ఎన్నో ఉపయోగాలు వచ్చాయి. అధ్యాపకుల విద్యాలయం తెలియజేసి ఈ కోర్సులో పాల్గొనడం సంకీర్ణంగా ఉంది. దీని ద్వారానే చక్కగా ఉపయోగంతో కొత్త విషయాలు తెలియజేస్తారు.

- డా. అర్జున్ హెచ్ మురికి, అసిస్టెంట్ ప్రొఫెసర్, వ్యక్త శాస్త్ర విభాగం, కాశీరీ విశ్వవిద్యాలయం

వ్యక్తశాస్త్ర పరిశోధనలకు పునాది..

వ్యక్తశాస్త్ర రంగంలో చక్కటి వేదిక గౌరవ వేయాలంటే వారికి ఈ కోర్సు పునాదిగా ఉపయోగపడుతుంది. 14 రోజుల పాటు నిర్వహించిన ఈ కోర్సులో వివిధ విశ్వవిద్యాలయాల నుంచి వచ్చిన వారికి ఈ కార్యక్రమం అభివృద్ధిని తెలుపుతుంది.

- డా. అర్జున్ హెచ్ మురికి, అసిస్టెంట్ ప్రొఫెసర్, వ్యక్త శాస్త్ర విభాగం, కాశీరీ విశ్వవిద్యాలయం

విజ్ఞాన అభివృద్ధిలో భాగస్వామి అవుతున్నారు.

- అర్జున్ ఆర్. మెట్టె, పరిశోధక విద్యార్థి, కర్ణాటక యూనివర్సిటీ, కర్ణాటక

జ్ఞాన పునరుత్తేజం

కొలిపారంగా వైవీయూలో రెఫ్రెషర్ కోర్సు నిర్వహించారు • వివిధ రాష్ట్రాల నుంచి పరిశోధకులు హాజరు

జమ్మాశాస్త్రీ సుందర్ తమిళనాడు రాష్ట్రం వరకు పలు భాషల సమ్మేళనం.. విభిన్న అలోచనల సభలులు మార్గదర్శకం.. వైవీయూ కేంద్రంగా వ్యక్తశాస్త్ర ప్రయత్నం విజయవంతంగా సాగుతోంది. పత్రం రోజుల పాటు విజ్ఞాన సముద్రం, పరిశోధకుల అనుభవాలు.. విజ్ఞాన దౌరంతర్జా పరిశోధనా చీజాలు మొలకెత్తినా విజ్ఞాన పునరుత్తేజం నింపుతోంది.

వైవీయూ: యోగివేమన విశ్వవిద్యాలయంలో కొలిపారంగా జరిగిన వైవీయూ అకాడమీ రిఫ్రెషర్ కోర్సు నిర్వహిస్తున్నారు. వింగళూరు వెంచు ఇండియన్ ఆకాడమీ ఆఫ్ సైన్సెస్, డిల్లీలో నేషనల్ సైన్స్ అకాడమీ, అలహాబాద్ లో నేషనల్ ఆకాడమీ ఆఫ్ సైన్సెస్ సోషల్ సైన్స్ నిర్వహిస్తున్న ఈ కోర్సుకు దేశంలోని పలు రాష్ట్రాల నుంచి ఎంపికైన అధ్యాపకులు, పరిశోధకులు 35 మంది జక్కటి విచ్చేసి శిక్షణలో పాల్గొంటున్నారు. వ్యవస్థాపక డైరెక్టర్ అతిథులు 18 నుంచి 31వ వరకు 14 రోజుల పాటు నిర్వహించే ఈ కోర్సులో నిపుణులైన అధ్యాపకులు, పరిశోధకులు వివిధ రాష్ట్రాల నుంచి హాజరు అవుతున్నారు. ఈ కోర్సులో వివిధ రాష్ట్రాల నుంచి హాజరు అవుతున్నారు. ఈ కోర్సులో వివిధ రాష్ట్రాల నుంచి హాజరు అవుతున్నారు.

ఆధునిక పద్ధతులను తెలుసుకోగలుగుతున్నాం..

యోగివేమన విశ్వవిద్యాలయంలో నిర్వహిస్తున్న రెఫ్రెషర్ కోర్సులో రిజిస్ట్రార్ సజీబ్ అహ్మద్ ప్రధానంగా పాల్గొన్నారు. వ్యక్తశాస్త్రంలో అధునిక పోకడలను తెలుసుకునే అవకాశం లభించింది. ఎంతో చక్కటి అలోచనలను వారాలంతా విశ్వవిద్యాలయం ఉంది.

- డా. సీనియర్ అధ్యాపకులు, అధ్యాపకులు, ముంబయ్ డివిజన్, కర్ణాటక, కలహస్తం, కేరళ

ఎంతో ఆసక్తికరంగా సాగుతోంది..

అభివృద్ధిని తెలుసుకోగలుగుతున్న ఈ కోర్సు ఎంతో ఆసక్తికరంగా సాగుతోంది. నిపుణులైన రిజిస్ట్రార్ సజీబ్ అహ్మద్ అధ్యక్షులుగా పనిచేసిన రెఫ్రెషర్ కోర్సులకు ఉపయుక్తంగా ఉండాలని అప్పటి సూతన పోకడలు తెలుసుకునే అవకాశం ఉంటుంది పలువురు వ్యక్తులు పేర్కొన్నారు. యోగి వేమన విశ్వవిద్యాలయంలోని వ్యక్తశాస్త్ర విభాగంలో మంగళవారం నుంచి రెండు వారాల పాటు జరిగే రెఫ్రెషర్ కోర్సు సమన్వయకర్త డాక్టర్ మహనూదన్ రెడ్డి ఆధ్వర్యంలో ప్రారంభమైంది. ముఖ్య అతిథులుగా హోజరైన కర్ణాటక విశ్వవిద్యాలయం పూర్వపు ఉపకులపతి అచార్య శ్రీనివాసరెడ్డి, జెంగుళూరు సైన్స్ అకాడమీ గౌరవ శాస్త్రవేత్త డా. ఆర్. ఆర్. రావు ప్రసంగిస్తూ పరిశోధనకు కావాల్సిన పూర్తి సమాచారం ఇవ్వడంలో లభిస్తుందన్నారు. అలాంటి సందర్భాలు అధ్యాపకులు, స్టూడెంట్లకు ఎంతో మేలు చేస్తాయన్నారు. వ్యక్తశాస్త్రం

SCIENCE ACADEMIES' EDUCATION PROGRAMME

IASc/SEP/RC- January/2018

11 August 2017

JOINT SCIENCE EDUCATION PANEL

Indian Academy of Sciences

Sebastian, K. L.
(Chairman)
Arunan, E.
Bachhawat, A. K.
Balakrishnan, V.
Chattopadhyay, Nitin
Dhar, Deepak
Mukunda, N.
Murthy, M.R.N.
Radhakrishnan, T. P.
Rangarajan, Govindan
Saidapur, S.K.
Sankaran, P.
Satheesh, S.K.
Sengupta, Pulak
Subramaniam,
Annapurni

Indian National Science Academy

Chattaraj, P. K.
Chattoo, B.B.
Chaudhuri, Probal
Goswami, J.N.

The National Academy of Sciences, India

Dimri, V.P.
Khurana, Paramjit
Misra, Gadadhar
Mittal, J.P.

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Dr A. Madhusudhana Reddy
Asst. Professor
Dept. of Botany
Yogi Vemana University
Kadapa 516 003

Sub: Refresher Course on "Plant Taxonomy and Ethnobotany" at Yogi Vemana University, Kadapa from 18 - 31 January, 2018.

Dear Dr Reddy,

This has reference to the letter forwarding a proposal and budget for organizing a Refresher Course in Yogi Vemana University, Kadapa. The Joint Science Education Panel of the three Academies will be happy to sponsor and support the Refresher Course. We note that Prof. R.R. Rao (INSA Honorary Scientist) will be the Course Director and you will be the Course Co-ordinator.

Your budget of Rs.7,67,750/- for 35 participants (inclusive of travel expenses/boarding/lodging for Resource Persons has been approved by the Science Education Panel.

Please note that only the names of Convener and Coordinator of the Workshop should be included in brochure/invitation etc. Names of members of the management, organizing committees, patrons etc should be strictly avoided.

As the Refresher Course is an all India one, it has to be advertised in our journals RESONANCE and CURRENT SCIENCE (copy of a typical announcement is attached). Please send us a draft of your announcement.

Applications should be submitted online through a link which will be available in our website. The Course Director and Coordinator will be provided a user-id/password to enable them to view the applications and make the selections.

Refresher Courses are sponsored and supported by the three National Science Academies - IASc, INSA and NASI. The names of INDIAN ACADEMY OF SCIENCES (BANGALORE), INDIAN NATIONAL SCIENCE ACADEMY (NEW DELHI) and THE NATIONAL ACADEMY OF



Indian Academy
of Sciences,
Bangalore



Indian National
Science Academy,
New Delhi



The National Academy
of Sciences, India
Allahabad

(1 of 2)

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SCIENCES, INDIA (ALLAHABAD) should therefore be mentioned in all publicity material such as programme sheet, invitation cards, etc.

The Course should be called "Science Academies' Refresher Course in "Plant Taxonomy and Ethnobotany".

(g) Please send 4-5 copies of the printed programme when ready.

(h) Funds for organizing the Course can be sent as an advance by electronic transfer. This can be sent after a bank account is opened and the following details are provided to us:

1. Name of the Bank;
2. Name of the Branch;
3. Account No.;
4. Name of the Account Holder
(in the name of Refresher Course);
5. IFSC – code (for Non-SBI accounts)

If necessary, an authorization letter from the Academy to the bank to open the Savings Bank account can be sent to you after we hear from you.

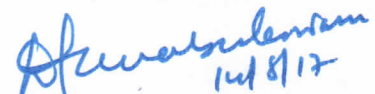
(i) The audited expenditure statement/utilization certificate duly signed by competent authority (CA or Financial Controller) to be sent along with the report, once the Course is over. This is required for the Audit compliance.

(j) A CD containing the resource materials has to be made available at the Academy website. The Academy would like to make the educational material made for the course available to a large audience at its website, Hence a CD containing the material (without infringement on the copyright issues) has to be made available by the course director to the Academy.

Please go ahead with organizing the Course in consultation with Professor R.R. Rao and keep in touch with the Academy about the progress.

Best wishes,

Yours sincerely,


1st 8/17

T. D. Mahabaleswara
Coordinator (LW/RC)
Science Education Panel

REPORT ON

**A Two weeks “Science Academies Refresher Course’ in
“Plant Taxonomy and Ethnobotany”
(January 18th - 31st, 2018)**

Sponsored by

Indian Academy of Sciences, Bangalore

Indian National Science Academy, New Delhi

The National Academy of Sciences India, Allahabad



Organized by

Department of Botany,

Yogi Vemana University,

Vemanapuram, Kadapa-516005

Andhra Pradesh, India



www.yogivemanauniversity.ac.in



Course Director


Dr. R. R. Rao

Course Co-Ordinator


Dr. A. Madhusudhana Reddy



Invitation



Department of Botany, Yogi Vemana University, Kadapa, A.P
Cordially invites you for the inaugural function of
A Two week Science Academies Refresher Course in
“Plant Taxonomy and Ethnobotany” (January 18 - 31, 2018)
On 18th January 2018 at 10.15 am
E-class room-1, Sir C.V. Raman Science Block



Chief Guest
Prof. Attipalli Ramachandra Reddy
Vice-Chancellor
Yogi Vemana University, Kadapa

Special Guest
Dr. R. R. Rao,
Course Director
INSA Honorary Scientist, Bangalore

Guest of Honours
Prof. K. Chandraiah
Registrar
Yogi Vemana University, Kadapa.

Prof. K. Satyanarayana Reddy
Principal
Yogi Vemana University College, Kadapa.

Dr. M. Sanjappa
INSA Honorary Scientist, GKVK, Bangalore

Prof. K. R. Shivanna
INSA Honorary Senior Fellow, ATREE, Bangalore

Dr. A. Madhusudhana Reddy
Course Coordinator
Department of Botany, Yogi Vemana University

A Two weeks “Science Academies Refresher Course” in
“Plant Taxonomy and Ethnobotany” (January 18th–31st, 2018)

Sponsored by



Indian Academy of Sciences, Bangalore
Indian National Science Academy, New Delhi
The National Academy of Sciences India, Allahabad

Organized by

Department of Botany, Yogi Vemana University, Kadapa,
Andhra Pradesh, India




Dr. R. R. Rao, Course Director
Dr. A. Madhusudhana Reddy, Course Coordinator

A Refresher Course in “Plant Taxonomy and Ethnobotany” will be held in the Department of Botany, Yogi Vemana University, Kadapa, from **January 18th - 31st 2018** for the benefits of faculty involved in teaching undergraduate and postgraduate courses. Participants in this course will gain practical and theoretical experience in Plant Taxonomy and Ethnobotany designed by Dr. R. R. Rao, the Course Director, INSA Honorary Scientist, Bangalore.

Applicants are invited from teachers with experience in teaching undergraduate and post graduate courses in Botany and life sciences especially in Plant Taxonomy and Ethnobotany. The number of seats will be 35. Selected participants will be provided with round-trip bus/train (III AC) fare by the shortest route and local hospitality during the course in addition to course material.

Interested applicants must submit their application ONLINE by clicking on the following link.
https://web-japps.iias.ac.in:8080/Refreshercourse/applicationform.jsp?Meet_663be83a0f1e
A copy of the application form signed by the applicant should also be sent by post to the Course Coordinator. The applicants, the form must also be signed and stamped by the Head of the applicant's institution stating that leave will be sanctioned if the applicant is selected for the Course. A recommendation scanned copies of the duly signed documents sent by e-mail will also be accepted.

Applications may be sent to Dr. A. Madhusudhana Reddy, Course Coordinator, Refresher Course in “Plant Taxonomy and Ethnobotany”, Department of Botany, Yogi Vemana University, Kadapa -516 003, Andhra Pradesh.
e-mail: grascc@yaho.com Phone: 994-977-9166.
Last date of the receipt of applications: 15th November 2017
Selected participants will be informed by: 1st December 2017



E-Banner



A Two week “Science Academies Refresher Course” in
“Plant Taxonomy and Ethnobotany” on January 18th - 31st, 2018



Indian Academy of Sciences, Bangalore
Indian National Science Academy, New Delhi
The National Academy of Science, Allahabad

Organized by

Department of Botany,
Yogi Vemana University, Kadapa

Dr. R.R.Rao
Course Director

Dr.A.Madhusudhana Reddy
Course Coordinator

**A Two weeks “Science Academies Refresher Course’ in
“Plant Taxonomy and Ethnobotany”
(January 18th - 31st, 2018)**

Organized by

**Department of Botany, Yogi Vemana University, Kadapa,
Andhra Pradesh, India.**

(Dr. R. R. Rao, Course Director Dr. A. Madhusudhana Reddy, Course Coordinator)



Group Photo

A report on

A Two week 'Science Academies Refresher Course' in "Plant Taxonomy and Ethnobotany" (January 18 - 31, 2018)

Preamble

Two-week Refresher Courses form an important segment of the activities of the Science Academies' Programmes organized by the Joint Science Education Panel of the three Science Academies. The primary focus is to enhance the quality of science education at graduate and post graduate levels. Refresher Courses are thus primarily aimed at helping teachers to add value to their teaching. The Course content thus needs to be designed to meet the above need. While discussion of modern areas of topical interest is important, the Course should be so designed as to have direct relevance to the materials covered in the graduate and post graduate curricula in universities and institutions in the country and are not necessarily meant to be at an advanced research level.

Goal of the Refresher Course: To provide better insights to the UG & PG teachers working in life science departments from various universities and degree colleges on the latest trends and emerging fields of research in "Plant Taxonomy and Ethnobotany".

Objectives Course: The objective of this program is to learn and promote the interaction between scientists, researchers, professors and teachers in Plant Taxonomy and Ethnobotany. To bring fellows of national academies, faculty from various institutions on to a common platform to discuss modern aspects in plant taxonomy and Ethnobotany. The participants of the program will collaborate to identify and tackle some of the most important theoretical, practical and field challenges arising from plant taxonomy. To update life science faculty on latest developments in plant taxonomy and ethnobotany for better teaching.

Participants: In reference with refresher course announcement total 101 applicants (graduate and post graduate teachers, Scientists and researchers) from various Universities, Degree colleges, Research institutions has been registered. The selection committee has selected 35 participants from all over India from various institutions to participate in the refresher course entitled 'A Two week 'Science Academies Refresher Course' in "Plant Taxonomy and Ethnobotany" (January 18 - 31, 2018).

ABSTRACT OF THE REFRESHER COURSE

A Two weeks 'Science Academies Refresher Course' in "Plant Taxonomy and Ethnobotany" (January 18 - 31, 2018) Sponsored by Indian Academy of Sciences, Bangalore. Indian National Science Academy, New Delhi. The National Academy of Sciences India, Allahabad. Organized by Department of Botany, Yogi Vemana University, Kadapa, Andhra Pradesh, India. The course Director is Dr. R. R. Rao and the course coordinator is Dr. A. Madhusudhana Reddy. The course announcement has published in Current Science, Resonance and print media nationwide and also the announcement has circulated to colleges and universities. The course has received 101 online applications from all over India. The selection committee has selected 35 participants from various institutions. A total of 12 resource persons have delivered lectures and tutorials on Plant Taxonomy and Ethnobotany. During the course a total of 56 sessions were conducted including lectures, tutorials, practicals, group discussions and field oriented classes for plant identification. Topics covered in the course, all areas of traditional and modern aspects of plant taxonomy and ethnobotany including molecular taxonomy. Galapagos Island and Darwin's theory of evolution'. In brief, History of plant taxonomy, Plant classification system, APG IV, Current problems in taxonomy teaching and research in universities, Changing trends in plant taxonomy, Botanical Nomenclature, Phytogeography and Plant taxonomy, Musaceae, Zingiberaceae, Species concept and population concept, How to write monographs and revisions, Botanical Keys for identification of plants, Concept and development of Herbarium, functions of a herbarium, Taxonomic literature, Biodiversity in India; Cytotaxonomy, Chemotaxonomy, and many other related topics lichens, bryophytes, taxonomy and ethnobotany, Role of taxonomy in Medicinal Plants and Drug Discovery, global convention on biodiversity taxonomy and conservation of biological diversity, pollen biology, Relevance of Higher plants to drug discovery and Biodiversity Conservation and bio fuels.

Practical's classes conducted in the afternoon after the lecture schedules. The practical classes include lessons on how to describe a plant, how to identify a plant, how to classify the plants, nomenclature, how to prepare herbarium specimens, how to write Floras, how to write monographs, checklists, how to handle the specimens and all other associated exercises. Practical also conducted on lichens and bryophytes and other allied branches

Field tours are arranged two days, one day at Seshachalam Biosphere Reserve (17 biosphere reserve in India), Palakonda hills and one Sunday acquainted with campus flora and two sessions

conducted in YVU Botanical Garden. Trained in collection, identification and description of plants etc.

Refresher Course manual: The course coordinator collected write up of all lectures for the Manual from resource persons. The write up of all lectures and demonstrations prepared in a CD and distributed to participants in the end of the course. In the beginning of the course the organizers provided three books related to plant taxonomy and Ethnobotany 1. Plant Taxonomy 2. Manual of Ethnobotany 3. Plant Directory to all participants.

Last before day we conducted examination to participants covering in all accepts. The participants have secured 70 to 95 % of marks. The course concluded with feedback from participants and certificates distribution in valedictory function. All the participants have appreciated science academies and organizers for organizing the refresher course in plant taxonomy and all participants are suggested that next time organize the field and lab oriented course in plant taxonomy.

Inaugural Session: The refresher course was initiated with distribution of course kit (bag, note pad, pen and course material) for 35 selected participant's on 18th January 2018 in-between 9.00 am to 10.00 am. As customary we are having brief inaugural sections to start this a two weeks Science Academies refresher course on "Plant Taxonomy and Ethnobotany". The programme started at sharply at 10.00 am with a warm welcome by Prof. P. S. Shavalli Khan, Professor of Botany, Yogi Vemana University, Kadapa. He invited all dignitaries on to the dais Prof. Attipalli R. Reddy Vice-Chancellor, Yogi Vemana University, Dr. R. R. Rao (Course Director), Prof. K. R. Shivanna and Dr. M. Sanjappa (Guest of Honor), Prof. K. Satyanarayana Reddy, Principal of the YVU College, Prof. K. Chandraiah, Registrar, Yogi Vemana University and Dr. A. Madhusudhana Reddy, Course Coordinator. The programme has hand over to Course Coordinator to preside the programme. The programme started with lighting of lamp with all dignitaries on the dais and followed by invocation.

The Course Coordinator Dr. A. Madhusudhana Reddy has brief up about the programme, the course announcement has published in Current Science, Resonance and print media nationwide and also the announcement has circulated to colleges and universities. The course has received 101 online applications from all over India. The selection committee has selected 35 participants from various institutions. A total of 12 resource persons will be delivered lectures and tutorials

on Plant Taxonomy and Ethnobotany a total of 56 sessions will be conducted including lectures, tutorials, practicals, group discussions and field oriented classes for plant identification.

Topics covered in the course, all areas of traditional and modern aspects of plant taxonomy and ethnobotany including molecular taxonomy.

Prof. Attipalli R. Reddy, Vice-Chancellor has delivered inaugural address, he said every plant species on the earth is invaluable as each one has its own human or environment related utility. Reiterating the need to be in pace with the new trends in the plant classifications, he informed that the plant taxonomy is the most basic subject of plant sciences and its knowledge is essential for in-depth research on any form of plant life. Underlying the importance of plant extracted chemical compounds; he said photochemical is now treated as an important cure for cancer.

Dr. R. R. Rao, Course Director has highlighted that the various programmes sponsored by the science academies. He informed that studies on taxonomy and ethnobotany give more meaningful and better insight into the plant life sciences research. He gave a brief history about Indian Science Academies. He clearly explained the role of science academies in promoting strong science platform in universities and colleges by sponsoring various programmes like Summer Research Fellowships for students and faculties to learn the advanced research, Refresher Courses for faculties on contemporary topics, refresher course to listen and interact with the scientific fellows to improve their knowledge and skills. He also pointed out the 4 journals that are published by the science academies. Dr. Rao mentioned that now a day's plant taxonomy is in crisis due to shortage of trained taxonomist and there is no good plant taxonomy teaching faculty in colleges. This is the time for train the plant taxonomist for teaching and plant identification in the field and lab. This is the good platform for learning of plant taxonomy. Dr. Rao finally emphasized the importance of the course and how to utilize the course material for teaching purpose. Prof. K. R. Shivanna, Honorary Senior Fellow, ATREE, Bangalore., has stated that the course importance and he motivated the participants has about biodiversity conservation.

Distribution of Refresher Course kit to the Participants



Inviting Chief Guest and Dignitaries



Inaugural Session



Prof. A. Ramachandra Reddy, Vice Chancellor addressing the inaugural session



Message by Prof. K. Chandraiah, Registrar



Message by Dr. R. R. Rao

Inviting Chief Guest and Dignitaries for lightening of lamp by Dr. A.M. Reddy



Lightening of lamp by the Prof. A. Ramachandra Reddy & Dr. R.R. Rao



Lightening of lamp by the Dr. M. Sanjappa & Invocation by the participants

Prof. K. Chandraiah, Registrar, has explained role of refresher course in teaching and learning process and also, he mentioned about herbal medicines its importance in rural areas. He has appreciated the all Science academies that are sponsored the 2 weeks refresher course to Y. V. University. In the end of the inaugural section the Course Coordinator Dr. A. Madhusudhana Reddy has given brief idea about the course, practical's and field oriented classes during the course. The inaugural function end with introduction of participants and vote thanks Followed by the felicitations, Group photo and Tea Break

THE DETAILED PROGRAMME OF THE COURSE

Date & Time	Programme/Title of lecture	Resource Persons
18-01-2018	THURSDAY Day-1	
09.00 - 10.00am	Registration	
10.00 -11.00 am	Inauguration	
11.00 -11.10 am	Tea Break	
11.10 -12.20 pm	Plant taxonomy, changing scenario, current status and future prospects	Dr. R. R. Rao
12.20 - 1.30 pm	Floristic diversity of India an overview	Dr. M. Sanjappa
1.30 - 2.20 pm	Lunch Break (Guest House)	
2.20 - 3.50 pm	Galapagos Islands and Darwin's theory of evolution	Prof. K. R. Shivanna
3.50 - 4.00 pm	Tea Break	
4.00 -5.30 pm	The Herbarium, its concepts and functions and current problems in management;	Dr. R. R. Rao
19-01-2018	FRIDAY Day-2	
09.30 –11.00 am	Conservation of plant diversity with particular reference to some Indian medicinal plants	Prof. K. R. Shivanna
11.00 - 11.10am	Tea Break	
11.10 - 12.40pm	Plant diversity and conservation	Dr. M. Sanjappa
11.10 -12.40 pm	Biodiversity and its Significance	Dr. R. R. Rao
1.00 - 2.00 pm	Lunch Break (Guest House)	
2.00 - 3.30 pm	History of Taxonomy Research in India and the role of BSI in Taxonomy Research	Dr. M.Sanjappa
3.30 - 3.40 pm	Tea Break	

3.40 - 5.10 pm	Practical:Description& classification & botanical keys of Plants	Dr. M. Sanjappa
20-01-2018	SATURDAY Day-3	
09.30 - 1.00 am	Why frequent changes in botanical names? Some aspects of Botanical nomenclature	Dr. R. R.Rao
11.00 -11.10 am	Tea Break	
11.10 -12.40 pm	Biodiversity and its Significance	Dr. R. R. Rao
1.00 - 2.00 pm	Lunch Break (Guest House)	
2.00 - 3.30 pm	The Herbarium and its Making	Dr. R. R. Rao
3.30 - 3.40 pm	Tea Break	
3.40 - 5.10 pm	Biodiversity hotspots	Dr. R. R. Rao
21-01-2018	SUNDAY Day-4	
09.30 -11.00 am	Taxonomic literature	Dr. R. R. Rao
11.00 -11.10 am	Tea Break	
11.10 -12.40 pm	Methods and techniques of ethnobotanical study and research	Dr. R. R. Rao
1.00 - 2.00 pm	Lunch Break (Guest House)	
2.00 - 3.30 pm	Practical:Description& classification & botanical keys of Plants	Dr. A. M. Reddy
3.30 - 3.40 pm	Tea Break	
3.40 - 5.10 pm	Practical:Description& classification & botanical keys of Plants	Dr. A.M. Reddy
22-01-2018	MONDAY Day-5	
09.30 - 11.00am	A P G System of Classification	Prof. B. Ravi Prasad Rao
11.00 - 11.10am	Tea Break	
11.10 -12.40pm	Lecture on Musaceae in India part-1	Prof. M. Sabu
1.00 - 2.00 pm	Lunch Break (Guest House)	
2.00 - 3.30 pm	Conservation of Biodiversity with reference to Eastern Ghats of India	Prof. B. Ravi Prasad Rao
3.30 - 3.40 pm	Tea Break	
3.40 - 5.10 pm	Lecture on Musaceae in India part-2	Prof. M. Sabu
23-01-2018	TUESDAY Day-6	
09.30 - 1.00 am	Diversity of Zingibaraceae in India	Prof. M. Sabu
11.00 - 11.10am	Tea Break	

11.10 -12.40 pm	Liverwort and Hornwort Diversity in India - An appraisal	Dr. D.K. Singh
1.00 - 2.00 pm	Lunch Break (Guest House)	
2.00 - 3.30 pm	Practical's: Collection, Preservation, Identification and Maintenance of Lichens	Dr. A. M. Reddy
3.30 - 3.40 pm	Tea Break	
3.40 - 5.10 pm	Practical's: Collection, Preservation, Identification and Maintenance of Lichens	Dr. A. M. Reddy
24-01-2018	WEDNESDAY Day-7	
09.30 -11.00 am	Collection, Preservation and Maintenance of Bryophytes,	Dr. D.K. Singh
11.00 - 11.10am	Tea Break	
11.10 -12.40 pm	Biotechnology for Biodiversity	Dr. T Chandra Sekhar
1.00 - 2.00 pm	Lunch Break (Guest House)	
2.00 - 3.30 pm	Practical's: Collection, Preservation and Maintenance of Bryophytes	Dr. D.K. Singh
3.30 - 3.40 pm	Tea Break	
3.40 - 5.10 pm	Practical- plant morphology	Dr. A.M. Reddy
25-01-2018	THURSDAY Day-8	
09.30 -11.00 am	Laboratory Techniques and Identification of Bryophytes	Dr. D.K. Singh
11.00 - 11.10am	Tea Break	
11.10 -12.40 Pm	Plant conservation / Tissue culture techniques	Prof. P. Chandramathi
1.00 - 2.00 pm	Lunch Break (Guest House)	
2.00 - 3.30 pm	Relevance of Higher plants to drug discovery and Biodiversity Conservation: End of an era or an Endless Frontier ?	Prof. A. G. Damu
3.30 - 3.40 pm	Tea Break	
3.40 - 5.10 pm	Practical: Practical- Grass plant morphology	Dr. A. M. Reddy
26-01-2018	FRIDAY Day - 9	
09.30 -11.00 am	Plant Identification -1	Dr. A. M. Reddy
11.00 - 11. am	Tea Break	
11.10 -12.40 pm	Plant Identification -2	Dr. A. M. Reddy
1.00 - 2.00 pm	Lunch Break (Guest House)	

2.00 - 3.30 pm	Identification of trees at YVU Botanical Garden	Dr. A. M. Reddy
3.30 - 3.40 pm	Tea Break	
3.40 - 5.10 pm	Identification of RET Plants at Botanical Garden	Dr. A. M. Reddy
27-01-2018	SATURDAY Day - 10	
09.30 - 1.00 am	Plant Molecular systematics	Prof. M. N. V Prasad
11.00 - 11.10am	Tea Break	
11.10 -12.40 pm	Molecular Taxonomy	Prof. M. N. V Prasad
1.00 - 2.00 pm	Lunch Break (Guest House)	
2.00 - 3.30 pm	Practical's: Plant Identification with Gamble flora	Dr. A. M. Reddy
3.30 - 3.40 pm	Tea Break	
3.40 - 5.10 pm	Practical's: Plant Identification with Gamble flora	Dr. A. M. Reddy
28-01-2018	SUNDAY Day- 11 By Dr. A. M. Reddy	
9-30 to 5-30pm	Engaged 4 session: BY Dr. A. M. Reddy Field trip conducted at Seshachalam Biosphere Reserve forests. Explained about 60 forest plants and its characters for easy identification	
29-01-2018	MONDAY Day-12	
09.30 - 11.00am	Flora of Andhra Pradesh	Prof. T. Pullaiah
11.00 - 11.10am	Tea Break	
11.10 - 12.40am	Ethnobotany India and Methodology	Prof. T. Pullaiah
1.00 - 2.00 pm	Lunch Break (Guest House)	
2.00 - 3.30 pm	Acts and International Conventions in relation to conservation of Biodiversity in India	Prof. Rama Krishna
3.30 - 3.40 pm	Tea Break	
3.40 - 5.10 pm	Phytogeography	Prof. Rama Krishna
30-01-2018	TUESDAY Day-13	
09.30 - 11.00am	Pollination biology – the driving force behind the origin and evolution of Angiospermic flowers	Dr. R. R. Rao
11.00 - 11.10am	Tea Break	
11.10 - 12.40 pm	Some emerging challenges in contemporary botanical science with vascular plants.	Dr. R. R. Rao

1.00 - 2.00 pm	Lunch Break (Guest House)	
2.00 - 3.30 pm	Practical: Identification and Nomenclature	Dr. A. M. Reddy
3.30 - 3.40 pm	Tea Break	
3.40 - 5.10 pm	Assessment test; Objective type questions covering all aspects of taxonomy; 50 questions each carrying 2 marks.	Dr. A. M. Reddy
31-01-2018	WEDNESDAY Day-14	
09.30 - 11.00am	Endangered Species: Problems and solutions	Dr. R. R. Rao
11.00 - 11.10am	Tea Break	
11.10 - 12-40pm	Practical: Description & classification & botanical keys of Plants	Dr. R. R. Rao
1.00 - 2.00 pm	Lunch Break (Guest House)	
2.00 - 3.30 pm	Practical: Preparation of keys	Dr. A. M. Reddy
3.30 - 3.40 pm	Tea Break	
3.40 - 5-30 pm	Tutorials: Discussion on assessment test and Valedictory function	Dr. R.R. Rao Dr. A.M. Reddy
	High tea and disperse	

Lectures By Resource Persons



Dr. R. R. Rao



Dr. K. R. Sivanna



Dr. M. Sanjappa



Dr. D. K. Singh



Dr. Ramakrishna



Dr. M. Sabu

Lectures By Resource Persons



Prof. T. Pullaiah



Prof. M.N.V. Prasad



Prof. B. Ravi Prasad Rao

Practicals - Tutoriels - Exam



**Conducted by Dr. R. R. Rao, Dr. M. Sanjappa, and Dr. D.K. Singh
Dr. A.Madhusudhana Reddy (Course Coordinator) and Dr. Anjali Devi B.**

YVU Botanical Garden visit by participants



Field Tour at Seshachalam Biosphere Reserve



Feedback by the participants



Felicitation to Dr. R. R. Rao



Felicitation to Resource Persons



To Dr. M. Sanjappa



To Dr. K.R. Sivanna



To Prof. A.R. Reddy, VC, YVU



To Prof. K. Chandraiah



To Prof. P. S. Sha Valli Khan

Valedictory programme: Before starting the valedictory session the participants Mrs. JAYANTHI D and Mr. Martin Paul has presented 15 min movie on two weeks course. Dr R. R. Rao and Prof. Attipalli R. Reddy, Vice-Chancellor has appreciated their efforts for making the course movie. The programme was ended with Valedictory Session with report presentation by Dr. A. Madhusudhana Reddy, Course Coordinator. Valedictory address by Prof. Attipalli R. Reddy, Vice-Chancellor and Dr. R. R. Rao, Course Director, INSA Honorary Scientist, Bangalore and the vote of thanks was delivered by the course coordinator.

The overall feedback is about the refresher course from all participants are well appreciated the all science academies for sponsoring this kind of programme and organizers and expressed that the teachers required 2 week training programme in the present theme. Then the course director Dr. R. R. Rao has promised that I will bring to the notice of science academies. In the end the course director and course coordinator are felicitated by all participants.

List of Resource persons

S.No.	Name of the Resource Person	Designation & Address
1	Dr. R. R. RAO, FNA	INSA Honorary Scientist, Bangalore
2	Prof. K. R. Shivanna	Honorary Senior Fellow, ATREE, Bangalore
3	Prof. M. Sabu	Department of Botany, University of Calicut Kerala- 673 635, India,
4	Dr. M. Sanjappa	CSIR Emeritus Scientist, GKVK, Bangalore
5	Prof. Ramakrishna	Former Director, Zoological Survey of India
6	Dr. D. K. Singh	Dr. D. K. Singh, Scientist (Rtd.) NBRI Lucknow
7	Prof. M.N.V. Prasad	Professor, Dept. of Plant Science, University of Hyderabad, Hyderabad.
8	Prof. T. Pullaiah	Former Professor, Dept. of Botany, S.K. University, Anantapur (living in Bangalore)
9	Dr. T. Chandra Sekhar	Dept. of Envi. Sci. YVU, Kadapa
10	Prof. P. Chandramathi Shankar	Professor, Dept. of Biotechnology, YVU, Kadapa
11	Prof. A. G. Damu	Professor, Dept. of Chemistry, YVU
12	Dr. A. M. Reddy	Course Coordinator, Dept. of Botany, YVU

List of Participants

S.No.	Name & Institute	e-mail	Phone
1	DEEPU PANDITA LANE NO. 09, BLOCK NO. 44, FLAT NO. 11, JAGTI COLONY, NAGROTA, JAMMU	deepupandita@gmail.com	9596938688
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	C/o. A.ChandrashekarreddyH.No. 116, Balagoudnagar, Siddipet		
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14	MULLANGI SRIDHAR REDDY Dr. M. Sridhar Reddy Assistant Professor Department of Environmental Science Yogi Vemana University, Kadapa, Andhra Pradesh	sridharmullangi@yahoo.com	8096022189
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Prof. K. CHANDRAIAH
REGISTRAR

No. YVU/DS/Dept. of English/2 Days FDP/Permission/2019 Dt. 13.02.2019.

PROCEEDINGS OF THE VICE-CHANCELLOR (Present: Prof. A. Ramachandra Reddy)

Sub. - Yogi Vemana University, Kadapa - Academic Section - The Dean Faculty of Arts
Request to permit for conducting a Two Week Faculty Development Programme (Ten
Days) and also for the sanction of incidental charges - Orders - Issued.
Ref. :- 1. Letter No. NIL, dated 08.02.2019 of the Prof. P. Padma, Dean, Faculty of Arts.
2. The Hon'ble Vice-Chancellor's Orders dated : 12.02.2019.

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ORDER

Having considered the contents of the note file dated 12.02.2019, the Hon'ble Vice-Chancellor has ordered that, Prof. P. Padma, Dean, Faculty of Arts, Yogi Vemana University, Kadapa be permitted for conducting a **Two Week Faculty Development Programme** (Ten Days) i.e. from **23.02.2019 to 06.03.2019** in the Campus with the cooperation of Resource Persons by following usual procedure.

(BY ORDER)



REGISTRAR

TO

Prof. P. Padma, Dean, Faculty of Arts, Yogi Vemana University for taking necessary action.

Copy to:

1. The Principle, Yogi Vemana University College, Kadapa for information
2. Resource Persons (Faculty Development Programme-2019)
3. The CO-Ordinator, Finance Section, YVU for information and taking necessary action.
4. The Hon'ble Vice-Chancellor Table for favour of information.
5. The Assistant Administrative Officer for information.