

NALLAMUTHU GOUNDER MAHALINGAM COLLEGE,

POLLACHI - 642 001

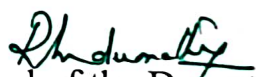
DEPARTMENT OF CHEMISTRY

CIRCULAR

The value added certificate course offered by the Department of Chemistry (UG - Aided) entitle with "*Biofertilizers*". Interested students can enroll their names to Dr. M. Selladurai, Department of Chemistry on or before 02.01.2023.



Dr. R. MUTHUKUMARAN,
M.A., M.Phil., B.Ed., Ph.D.,
PRINCIPAL
N.G.M. College, Pollachi - 642 001
Coimbatore District



Head of the Department

Dr. INDUMATHY RAMASAMY M.Sc., Ph.D.,
Assistant Professor & Head
Department of Chemistry
Nallamuthu Gounder Mahalingam College (Autonomous)
Pollachi - 642 001.

Programme Code:	B.Sc.	Programme Title:	Bachelor of Chemistry	
Course Code:	22UCY5VA	Title	Batch:	2022 – 2025
		Value Added Course -	Semester:	V
Lecture Hrs./Week	30 Hrs	Biofertilizers	Credits:	2*

Course Objective

To understand the basic knowledge of biofertilizer, microbes, cyanobacteria, mycorrhizal, organic farming, recycling and vermicompost.

Course Outcomes

On the successful completion of the course, students will be able to

CO Number	CO Statement	Knowledge Level
CO1	Remember the microbial diversity in various agro-ecologies for biofertilizer application in diversified systems.	K1
CO2	Develop the integrated management for better crop production by using microbes	K2
CO3	Identify the different forms of biofertilizers and their uses	K3
CO4	Compare the effect of mycorrhizal symbiosis on the growth and productivity of plants	K1 & K2
CO5	Understand the compose the green manuring and organic fertilizers	K2

Mapping with PO / PSO Vs CO

PO / PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2
CO										
CO1	H	H	M	L	H	M	M	H	-	-
CO2	H	H	M	L	H	M	M	H	-	-
CO3	H	H	M	L	H	M	M	H	-	-
CO4	H	H	M	L	H	M	M	H	-	-
CO5	H	H	M	L	H	M	M	H	-	-

H – High; M – Medium; L – Low

Units	Content	Hrs
Unit I	Biofertilizer: General account about the microbes used as biofertilizer – Rhizobium – isolation, identification, mass multiplication and carrier based inoculants.	6
Unit II	Microbes: Azospirillum: isolation and mass multiplication – carrier based inoculant, associative effect of different microorganisms. Azotobacter: classification, characteristics – crop response to Azotobacter inoculum, maintenance and mass multiplication.	6
Unit III	Cyanobacteria: Cyanobacteria (blue green algae), Azolla and Anabaena azollae association, nitrogen fixation, factors affecting growth and blue green algae.	6
Unit IV	Mycorrhizal: Mycorrhizal association, types of mycorrhizal association, taxonomy, occurrence and distribution, phosphorus nutrition, growth and yield – colonization of Vesicular Arbuscular Mycorrhizal (VAM) – isolation and inoculum production of VAM.	6
Unit V	Organic farming, Recycling and Vermicompost: Organic farming – Green manuring and organic fertilizers, Recycling of bio-degradable municipal, agricultural and Industrial wastes – biocompost making methods, types and method of vermicomposting – field Application.	6
Total Contact Hrs		30

Pedagogy: Direct Instruction, Digital Presentation and Flipped Class

Assessment Methods: Test, Seminar, Quiz, Assignments, Group Task.

Text Books

S.No.	Author	Title of the Book	Publishers \ Edition	Year of Publication
1	Vinayakumar, S. & Pawan, K.	Organic farming and bio-fertilizers	New Delhi: Discovery Publishing House Pvt. Ltd.	2018
2	Subbarao, N. S.	Bio-fertilizers in agriculture and forestry. 4th edn	Mumbai: Medtech Life Pvt. Ltd.	2017
3	Sathe, T. V.	Vermiculture and organic farming.	New Delhi: Daya Publishing House	2004

Indumathy

Page 2 of 3

Dr. INDUMATHY RAMASAMY M.Sc., Ph.D.,
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Reference Books

S.No.	Author	Title of the Book	Publishers \ Edition	Year of Publication
1	Dubey, R. C.	A textbook of biotechnology, 5th edn.	New Delhi: Sultan Chand and Sons Pvt. Ltd.	2014
2	NIIR Board	The complete technology book on biofertilizer and organic farming, 2nd edn	New Delhi: NIIR Project Consultancy Services.	2012



Staff In-charge

Dr. M. SELLADURAI, M.Sc., M.Phil., Ph.D.,
Assistant Professor
Department of Chemistry
N.G.M. College (Autonomous)
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HoD

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CERTIFICATE



This is to certify that Mr/✓Ms...VASUNTHARA.T...has successfully completed a Value Added Course of 30 hours in "Biofertilizers" during his/her Degree Programme (2022-2023) offered by Nallamuthu Gounder Mahalingam College (Autonomous) Pollachi - 642 001.



Course Coordinator



HoD



Principal

CERTIFICATE



This is to certify that Mr/Ms...VINOTHANIL S.....has successfully completed a Value Added Course of 30 hours in "Biofertilizers" during his/her Degree Programme (2022-2023) offered by Nallamuthu Gounder Mahalingam College (Autonomous) Pollachi - 642 001.

Course Coordinator

HoD

Principal

CERTIFICATE



This is to certify that Mr/Ms[✓] THASLEEM.MARLIA.S has successfully completed a Value Added Course of 30 hours in "Biofertilizers" during his/her Degree Programme (2022-2023) offered by Nallamuthu Gounder Mahalingam College (Autonomous) Pollachi - 642 001.

Course Coordinator

HoD

Principal

CERTIFICATE



This is to certify that Mr/Ms...THARANYA.M.....has successfully completed a Value Added Course of 30 hours in "Biofertilizers" during his/her Degree Programme (2022-2023) offered by Nallamuthu Gounder Mahalingam College (Autonomous) Pollachi - 642 001.


Course Coordinator


HoD


Principal

CERTIFICATE



This is to certify that Mr/Ms. THAMARAISHRI.S. has successfully completed a Value Added Course of 30 hours in "Biofertilizers" during his/her Degree Programme (2022-2023) offered by Nallamuthu Gounder Mahalingam College (Autonomous) Pollachi - 642 001.

Course Coordinator

HoD

Principal

CERTIFICATE



This is to certify that Mr/Ms...SOUNDARYA..T....has successfully completed a Value Added Course of 30 hours in "Biofertilizers" during his/her Degree Programme (2022-2023) offered by Nallamuthu Gounder Mahalingam College (Autonomous) Pollachi - 642 001.

Course Coordinator

HoD

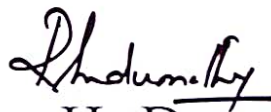
Principal

CERTIFICATE



This is to certify that Mr/Ms.....SNEKA. G.....has successfully completed a Value Added Course of 30 hours in "Biofertilizers" during his/her Degree Programme (2022-2023) offered by Nallamuthu Gounder Mahalingam College (Autonomous) Pollachi - 642 001.


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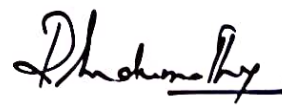

Principal

CERTIFICATE



This is to certify that Mr/Ms. SATHIYABAMA.V...has successfully completed a Value Added Course of 30 hours in "Biofertilizers" during his/her Degree Programme (2022-2023) offered by Nallamuthu Gounder Mahalingam College (Autonomous) Pollachi - 642 001.


Course Coordinator


HoD


Principal

CERTIFICATE



This is to certify that Mr/Ms.....SARANYA.R.....has successfully completed a Value Added Course of 30 hours in "Biofertilizers" during his/her Degree Programme (2022-2023) offered by Nallamuthu Gounder Mahalingam College (Autonomous) Pollachi - 642 001.

Course Coordinator

HoD

Principal

CERTIFICATE



This is to certify that Mr/Ms.....[✓]RITHIKA.V.....has successfully completed a Value Added Course of 30 hours in "Biofertilizers" during his/her Degree Programme (2022-2023) offered by Nallamuthu Gounder Mahalingam College (Autonomous) Pollachi - 642 001.


Course Coordinator


HoD

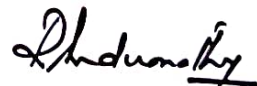

Principal

CERTIFICATE



This is to certify that Mr/Ms. [✓]PRABHAVATHI..C....has successfully completed a Value Added Course of 30 hours in "Biofertilizers" during his/her Degree Programme (2022-2023) offered by Nallamuthu Gounder Mahalingam College (Autonomous) Pollachi - 642 001.


Course Coordinator


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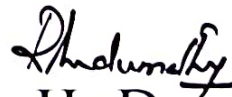

Principal

CERTIFICATE



This is to certify that Mr/Ms PAVITHRA SRIMUKI.K has successfully completed a Value Added Course of 30 hours in "Biofertilizers" during his/her Degree Programme (2022-2023) offered by Nallamuthu Gounder Mahalingam College (Autonomous) Pollachi - 642 001.


Course Coordinator


HoD

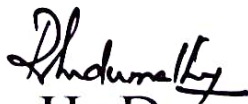

Principal

CERTIFICATE



This is to certify that Mr/Ms.....[✓]MITHRA..A.....has successfully completed a Value Added Course of 30 hours in "Biofertilizers" during his/her Degree Programme (2022-2023) offered by Nallamuthu Gounder Mahalingam College (Autonomous) Pollachi - 642 001.


Course Coordinator


HoD

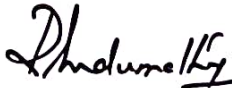

Principal

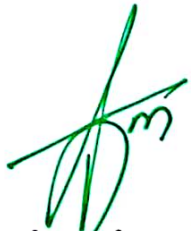
CERTIFICATE



This is to certify that Mr/✓Ms. MASUDHA.BEGUM.M has successfully completed a Value Added Course of 30 hours in "Biofertilizers" during his/her Degree Programme (2022-2023) offered by Nallamuthu Gounder Mahalingam College (Autonomous) Pollachi - 642 001.


Course Coordinator


HoD

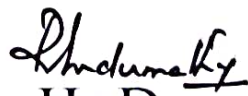

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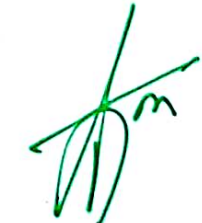
CERTIFICATE



This is to certify that Mr/✓Ms.....MANJU..S.....has successfully completed a Value Added Course of 30 hours in "Biofertilizers" during his/her Degree Programme (2022-2023) offered by Nallamuthu Gounder Mahalingam College (Autonomous) Pollachi - 642 001.


Course Coordinator


HoD


Principal

CERTIFICATE



This is to certify that Mr/Ms. MADHUSHREE..R.. has successfully completed a Value Added Course of 30 hours in "Biofertilizers" during his/her Degree Programme (2022-2023) offered by Nallamuthu Gounder Mahalingam College (Autonomous) Pollachi - 642 001.


Course Coordinator


HoD


Principal

CERTIFICATE



This is to certify that Mr/Ms...[✓]*KOWSIKA..V*.....has successfully completed a Value Added Course of 30 hours in "Biofertilizers" during his/her Degree Programme (2022-2023) offered by Nallamuthu Gounder Mahalingam College (Autonomous) Pollachi - 642 001.

M. Sundarany
Course Coordinator

R. Indumathy
HoD

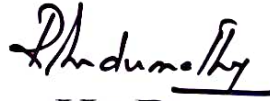
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Principal

CERTIFICATE



This is to certify that Mr/Ms...KIRUTHIKA.M.....has successfully completed a Value Added Course of 30 hours in "Biofertilizers" during his/her Degree Programme (2022-2023) offered by Nallamuthu Gounder Mahalingam College (Autonomous) Pollachi - 642 001.


Course Coordinator


HoD


Principal

CERTIFICATE



This is to certify that Mr/Ms.....[✓]**KAVIYA..S**.....has successfully completed a Value Added Course of 30 hours in "Biofertilizers" during his/her Degree Programme (2022-2023) offered by Nallamuthu Gounder **Mahalingam** College (Autonomous) Pollachi - 642 001.


Course Coordinator


HoD


Principal

CERTIFICATE



This is to certify that Mr/Ms.....[✓]KALAIVANI.M.....has successfully completed a Value Added Course of 30 hours in "Biofertilizers" during his/her Degree Programme (2022-2023) offered by Nallamuthu Gounder Mahalingam College (Autonomous) Pollachi - 642 001.

Course Coordinator

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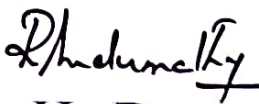
Principal

CERTIFICATE



This is to certify that Mr/Ms GINANASOWNTHARI.S has successfully completed a Value Added Course of 30 hours in "Biofertilizers" during his/her Degree Programme (2022-2023) offered by Nallamuthu Gounder Mahalingam College (Autonomous) Pollachi - 642 001.


Course Coordinator


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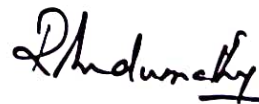

Principal

CERTIFICATE



This is to certify that Mr/Ms FAHUMITHA BANU.A has successfully completed a Value Added Course of 30 hours in "Biofertilizers" during his/her Degree Programme (2022-2023) offered by Nallamuthu Gounder Mahalingam College (Autonomous) Pollachi - 642 001.


Course Coordinator


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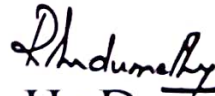

Principal

CERTIFICATE



This is to certify that Mr/Ms...[✓]DHARINI.S.....has successfully completed a Value Added Course of 30 hours in "Biofertilizers" during his/her Degree Programme (2022-2023) offered by Nallamuthu Gounder Mahalingam College (Autonomous) Pollachi - 642 001.


Course Coordinator


HoD


Principal

CERTIFICATE



This is to certify that Mr/Ms. CHANDRALEKA P. has successfully completed a Value Added Course of 30 hours in "Biofertilizers" during his/her Degree Programme (2022-2023) offered by Nallamuthu Gounder Mahalingam College (Autonomous) Pollachi - 642 001.

Course Coordinator

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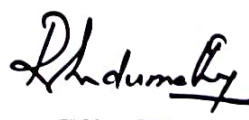
Principal

CERTIFICATE



This is to certify that Mr/Ms. [✓]BANUMATHI..C.....has successfully completed a Value Added Course of 30 hours in "Biofertilizers" during his/her Degree Programme (2022-2023) offered by Nallamuthu Gounder Mahalingam College (Autonomous) Pollachi - 642 001.


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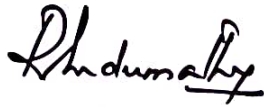

Principal

CERTIFICATE



This is to certify that Mr/Ms.....ARTHI..V.....has successfully completed a Value Added Course of 30 hours in "Biofertilizers" during his/her Degree Programme (2022-2023) offered by Nallamuthu Gounder Mahalingam College (Autonomous) Pollachi - 642 001.


Course Coordinator


HoD


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CERTIFICATE



This is to certify that Mr/Ms. VIGINESWARAN.N. has successfully completed a Value Added Course of 30 hours in "Biofertilizers" during his/her Degree Programme (2022-2023) offered by Nallamuthu Gounder Mahalingam College (Autonomous) Pollachi - 642 001.


Course Coordinator


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CERTIFICATE



This is to certify that ✓Mr/Ms. VIGNESHWARAN..M has successfully completed a Value Added Course of 30 hours in "Biofertilizers" during his/her Degree Programme (2022-2023) offered by Nallamuthu Gounder Mahalingam College (Autonomous) Pollachi - 642 001.


Course Coordinator


HoD


Principal

CERTIFICATE



This is to certify that Mr/Ms. [✓]VIGNESHWARAN..A. has successfully completed a Value Added Course of 30 hours in "Biofertilizers" during his/her Degree Programme (2022-2023) offered by Nallamuthu Gounder Mahalingam College (Autonomous) Pollachi - 642 001.


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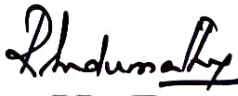

Principal

CERTIFICATE



This is to certify that Mr/Ms...SRINIVASAN.C....has successfully completed a Value Added Course of 30 hours in "Biofertilizers" during his/her Degree Programme (2022-2023) offered by Nallamuthu Gounder Mahalingam College (Autonomous) Pollachi - 642 001.


Course Coordinator


HoD


Principal

CERTIFICATE



This is to certify that Mr/Ms..[✓]SIVASURYA.S.....has successfully completed a Value Added Course of 30 hours in "Biofertilizers" during his/her Degree Programme (2022-2023) offered by Nallamuthu Gounder Mahalingam College (Autonomous) Pollachi - 642 001.


Course Coordinator


HoD


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CERTIFICATE



This is to certify that Mr/Ms RATHA KRISHNAN.P. has successfully completed a Value Added Course of 30 hours in "Biofertilizers" during his/her Degree Programme (2022-2023) offered by Nallamuthu Gounder Mahalingam College (Autonomous) Pollachi - 642 001.


Course Coordinator


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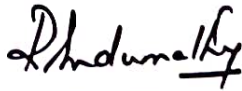

Principal

CERTIFICATE



This is to certify that Mr/Ms. RANJITH.KUMAR.M has successfully completed a Value Added Course of 30 hours in "Biofertilizers" during his/her Degree Programme (2022-2023) offered by Nallamuthu Gounder Mahalingam College (Autonomous) Pollachi - 642 001.


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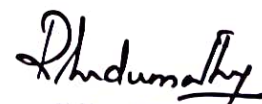

Principal

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This is to certify that Mr/Ms....MUTHURAJ.R.....has successfully completed a Value Added Course of 30 hours in "Biofertilizers" during his/her Degree Programme (2022-2023) offered by Nallamuthu Gounder Mahalingam College (Autonomous) Pollachi - 642 001.


Course Coordinator


HoD


Principal

CERTIFICATE



This is to certify that Mr/Ms....NAVEEN.G.....has successfully completed a Value Added Course of 30 hours in "Biofertilizers" during his/her Degree Programme (2022-2023) offered by Nallamuthu Gounder Mahalingam College (Autonomous) Pollachi - 642 001.

Course Coordinator

HoD

Principal

CERTIFICATE



This is to certify that Mr/Ms. BRINDHA SHREE.R. has successfully completed a Value Added Course of 30 hours in "Biofertilizers" during his/her Degree Programme (2022-2023) offered by Nallamuthu Gounder Mahalingam College (Autonomous) Pollachi - 642 001.

Course Coordinator

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Principal

CERTIFICATE



This is to certify that Mr/Ms. MURALI KRISHNA M. has successfully completed a Value Added Course of 30 hours in "Biofertilizers" during his/her Degree Programme (2022-2023) offered by Nallamuthu Gounder Mahalingam College (Autonomous) Pollachi - 642 001.


Course Coordinator


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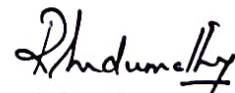

Principal

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This is to certify that Mr/Ms...KARTHIK...D.....has successfully completed a Value Added Course of 30 hours in "Biofertilizers" during his/her Degree Programme (2022-2023) offered by Nallamuthu Gounder Mahalingam College (Autonomous) Pollachi - 642 001.


Course Coordinator


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CERTIFICATE



This is to certify that Mr/Ms. JEEVA RATHINAM.D has successfully completed a Value Added Course of 30 hours in "Biofertilizers" during his/her Degree Programme (2022-2023) offered by Nallamuthu Gounder Mahalingam College (Autonomous) Pollachi - 642 001.

Course Coordinator

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CERTIFICATE



This is to certify that Mr/Ms. HEMANTH.SURYA.S. has successfully completed a Value Added Course of 30 hours in "Biofertilizers" during his/her Degree Programme (2022-2023) offered by Nallamuthu Gounder Mahalingam College (Autonomous) Pollachi - 642 001.

Course Coordinator

HoD

Principal

CERTIFICATE



This is to certify that ~~Mr~~✓~~Ms~~..~~GOWTHAM~~..~~RAM~~...~~K~~..has successfully completed a Value Added Course of 30 hours in "Biofertilizers" during his/her Degree Programme (2022-2023) offered by Nallamuthu Gounder Mahalingam College (Autonomous) Pollachi - 642 001.

Course Coordinator

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