Template for Department Profile

Name of the Department: Agrochemical & Pest Management

1) **From the Desk of Head in 200 words :**
2) **Brief History of the department along with present focus in academic & research – 150 words :**

The Department of Agrochemicals and Pest Management in its thirties has undertaken a venture and as the beginning of a new era, a postgraduate M.Sc. course in Agrochemicals and Pest Management established in June, 1993. This is a need based course that meets the regional demands of socio-economic development of the region with more than 80% placements in the industries and agriculture sectors.The course provides a training on the chemical analysis techniques, Applied entomology Plant pathology and formulation technology and actively participated in the research in thrust research areas ,Synthesis of novel synthetic pesticides ,use of bio-pesticides , Integrated pest management ,plant pathology , micronutrient research and development of bio-control agents. Dept has adopted Choice Based Credit System (CBCS) with academic flexibility. So far 2 M.Phil and 15 Ph.Ds students have been awarded their degrees in AgPM and number of research papers published is 50.Two research students of the Dept. have been awarded STAT Gold medal and Noel Derr Gold medal for their research work in the field of bio-control agents. Some faculty members have been honored for best presentation awards in several organized symposia, workshops and conferences. Some of the alumni of the department have been working in different reputed research organizations and abroad. Some of them have started their own agro-industries. Presently, 10 research students are working for Ph.D. The Department has successfully organized a one week Training Programme on, "Rural Agribusiness Development and Marketing" in the year 2006 in collaboration with Asian Institute of Technology, Thailand and signed a MoU with them. Similarly the Dept. has successfully organized one day national workshop on 'Recent Advances in Agrochemicals' RAA-2012 on 28th Feb 2012 and 'New Trend in Pest Management' NTPM-2013, on 31st January 2014. The M.Sc students complete one months Industrial training especially in pesticide and Fertilizer Industries such as Gharada, Chiplun, Jai research foundation, Hickel chemicals, Gujarat, RCF, Mumbai, NCL, Pune, VSI, Pune, NRC, Pune, etc.

3) **Vision :**

To cater the need of the pesticide industries and to Innovate advanced methods of farming.

4) Mission :

To develop Pesticide Residue Testing Laboratory
Development of new Lead molecules with Agricultural Importance.
Rearing of Bio-control agents for controlling insets pests

5) Core Values of the Departments :

6) Academic Programs offered with Intake :

- M.Sc. Part I- 40
- M.Sc. Part II- 40

7) Outcome base Education :

a. Program Education Objectives

- Department ensure that the programme objectives by taking the mid-term test. (Internal evaluation).

b. Programme Outcomes

-Synthesis of new lead molecules as pesticides
-Development of the methods for Agrochemical residue analysis
-Development of new Biopesticides
-Rearing of Biocontrol agents for Insect Pest Management Micronutrient Research

c. CBCS with course Structure

Paper no	Course Title	Teaching hours per week	Credits
I.	CC-101-CHEMISTRY OF PESTICIDES AND THEIR FORMULATIONS – I	4	4
II.	2 CC-102-SOIL SCIENCE, FERTILIZERS AND MICRONUTRIENTS CCPR-105-PRACTICAL	4	4
III.	CC-103- INTRODUCTORY AND INDUSTIRIAL ENTOMOLOGY	4	4
IV.	CC-104- BASIC CONCEPTS IN PLANT PATHOLOGY	4	4
V.	CC-201- CHEMISTRY OF PESTICIDES AND THEIR FORMULATIONS – II	4	4
VI.	CC-202- ANALYTICAL TECHNIQUES FOR AGROCHEMICALS	4	4
VII.	CC-203-ECONOMIC ENTOMOLOGY	4	4
VIII.	CC-204 AGRONOMY, SEED TECHNOLOGY, PATHOLOGY,WEED SCIENCE AND BIOSTATISTICS	4	4

IX.	CC-301- PESTICIDE RESIDUES AND TOXICOLOGY	4	4
X.	CC-302-PESTS OF CROP PLANTS AND THEIR CONTROL- I	4	4
XI.	CC-303- ANALYSIS OF AGROCHEMICALS	4	4
XII.	CC-304- DISEASES OF VEGETABLES, FRUIT TREES, PLANTATION TREES, FOREST TREES AND ORNAMENTAL PLANTS.	4	4
XIII.	CC-401- AGRO-BASED MARKETING MANAGEMENT	4	4
XIV.	CC-402- PESTS OF CROP PLANTS AND THEIR CONTROL – II	4	4
XV.	CC-403- MANUFACTURES OF AGROCHEMICALS	4	4
XVI.	CC-404- AGRICULTURAL BIOTECHNOLOGY AND INTEGRATED DISEASE MANAGEMENT.	4	4

8) Faculty Details (Details of the faculty in one page) :

Name	Prof. S. S. Chavan			
Contact no	9881647064			
E-mail ID	sanjaycha2@rediffmail.com			
Designation	Professor and Co-ordinator			
Research Areas	Functional Coordination Chemistry, Coordination-Organometallic Hybrid Materials, Catalysis, Nonlinear optics			
No of Research papers published in last 5 years	51			
Research Projects in last 5 years (Give details)	Completed:06		Ongoing	
Books Published (Details)	00			
Patents/ IPR	00			
No of Research papers published in National/International	Citation	H-Index	i10-index	RG Score
	97	6	5	

Conference				
Total no of Ph.D. Students	Awarded-07		Working -05	
Visits Abroad	Australia, New Zealand, Spain, France			
National/International Awards	08			
Selected Publications (10)	1. Synthesis, characterization, luminescence and catalytic properties of copper(I) complexes with N-(2-pyridylmethylene)-1,5-dimethyl-2-pyrazole-3-(2H)-one and triphenyl phosphine as ligand, S. S.Devkule, M. S. More, S. S. Chavan*, Inorg. Chim. Acta 455 (2017) 183. 2. Synthesis, characterization and photophysical properties of Ni(II) and Zn(II) complexes containing alkynyl functionalized salicylaldimine ligand and heterocyclic coligand M. S. More, S. S. Devkule, S. S. Chavan*, J. Fluorescence, 27 (2017) 841. 3. Coordination-organometallic hybrid materials based on the penta-nuclear M(II)-Ru(II) (M=Ni and Zn) complexes: Synthesis, spectroscopic characterization, electrochemical and luminescence studies S. S. Chavan*, S. B. Pawal, S. R. Lolage, J. Lumin., 181 (2017) 261. 4. Syntheses, structural characterization, luminescence and optical studies of Ni(II) and Zn(II) complexes containing salophen ligand M. S. More, S. B. Pawal, S. R. Lolage, S. S. Chavan*, J. Mol. Str. 1128 (2017) 419. 5. NLO active CuII/RuII and CdII/RuII coordination-organometallic complexes: synthesis, structural characterization and photoluminescence properties B. G. Bharate, S. S. Chavan*, J. Coord. Chem. 9 (2016) 1. 6. Copper(I) complexes of N-(2-{[(2E)-2-(4-nitrobenzylidenyl)hydrazinyl]carbonyl}phenyl) benzamide and triphenylphosphine: Synthesis, characterization and luminescence properties S. S. Chavan*, S. B. Pawal, M. S. More, A. C.			

	Willis, J. Fluorescence.26 (2016) 2033. 7. Synthesis, characterization and luminescence properties of azobenzene based heterobimetallic Ru(II)/M(II) (M=Ni and Zn) hybrid complexes composed of organometallic and coordination sites, S. S. Chavan*, S. R. Lolage, S. B. Pawal, J. Organomet. Chem., 815-816 (2016) 65. 8. Magneto-structural studies of sol-gel synthesized nanocrystalline manganese substituted nickel ferrite R. S. Pandav, R. P. Patil, S. S. Chavan, I. S. Mulla, P. P. Hankare, J. Magn. and Magnet. Mater., 417 (2016) 407. 9. Copper(I) complexes of 2-methoxy-(5-trifluoromethyl-phenyl)-pyridine-2yl-methlyene amine: Impact of phosphine ancillary ligands on emission and catalytic properties of Copper(I) complexes, S. S. Chavan*, S. K. Sawant, S. B. Pawal, M. S. More, Polyhedron, 105 (2016) 192. 10. Synthesis, crystal structure and conjugation properties of copper(I) phosphine complexes iminopyridine, A. N. Jadhav, S. B. Pawal, S. S. Chavan*, Inorg. Chim. Acta, 440 (2016) 77

Name	Dr. Chaitali S. Bagade			
Contact no	8390851436			
E-mail ID	chaitali12jan@gmail.com			
Designation	Assistant Professor (Temp.)			
Research Areas	Material science			
No of Research papers published in last 5 years	20			
Research Projects in last 5 years (Give details)	Completed:00		Ongoing-00	
Books Published (Details)	Nil			
Patents/ IPR	Nil			
No of Research papers published in National/International Conference	Citation	H-Index	i10-index	RG Score
	81	05	3	16.8

Total no of Ph.D. Students	Awarded		Working	
	Nil		Nil	
Visits Abroad	USA			
National/International Awards	DST-INSPIRE Fellowship			
Selected Publications (10)				

Name	Dr. T. G. Nagraja			
Contact no	9421287604			
E-mail ID	Tgnagaraja2010@gmail.com			
Designation	Contributary teacher			
Research Areas	Plant Pathology			
No of Research papers published in last 5 years	06			
Research Projects in last 5 years (Give details)	Completed:00		Ongoing-00	
Books Published (Details)	34			
Patents/ IPR	Nil			
No of Research papers published in National/International Conference	Citation	H-Index	i10-index	RG Score
	62	4	2	
Total no of Ph.D. Students	Awarded		Working	
	Nil		01	

Visits Abroad	
National/International Awards	
Selected Publications (10)	

9) Details of Research Laboratories & Infrastructure with Photographs.

- Chemical Science Laboratory
- Life Science Entamology Laboratory
- Life Science Pathlogy Laboratory
- One Class Room
- One Computer Lab
- Instrumentation Lab

Chemical Science Laboratory

Life Science (Entomology Laboratory)

Life Science Pathology Laboratory

Gas Chromatography (GC)

High Performance Liquid Chromatography (HPLC)

UV-Visible spectrophotometer

Laminar Flow Chamber
(Microbial Screening)

10) SET/NET Qualified Students. - Nil

11) Details of Students Placements.

Sr. No.	Name of Students	Industry/Institute	Year
1	Mr. Dinesh R Ghorpade	UPL Ltd, Gujrat	2017
2	Mr. Sujit V. Nade	UPL Ltd, Gujrat	2017
3	Mr. Chittaranjan K. Kadam	Bio Prime Agrisolution, Pvt. Ltd. Pune	2017
4	Mr. Shrikant Khapare	Lupin Pharmaceuticals, Goa	2018
5	Mr. Swapnil A. Kamble	AIMCO Pesticides, Chiplun	2018
6	Mr. Vishal S. Patane	PI Industries, Rajasthan	2018
7	Miss. Mayuri S. Varne	PI Industries, Rajasthan	2019
8	Mr. Shubham D. Jagtap	Pest Control India Ltd. Pune	2019
9	Mr. Onkar Nalawade	UPL Ltd, Gujrat	2019
10	Mr. Ajinkya Nimbalkar	Pest Control India Ltd. Pune	2019
11	Mr. Avinash Malkar	Adama India Pvt. Ltd., Hyderabad	2019

12	Miss. Supriya M. Savratkar	Teva Pharmaceuticals, Goa	2019
13	Mr. Dokuparthi Mohan Kumar	GODFREY PHILLIPS INDIA LIMITED, Hyderabad	2019

12) Details of MoUs and Linkages.- Nil

13) Extracurricular and Extension activities.

-Value Added, Swachata Abhiyan

14) List of Distinguished Alumni.

i) Dinesh Ghorpade –(UPL Ltd, Gujrat)

ii) Sujit Nade –(UPL Ltd, Gujrat)

iii) Chittaranjan Kadam –(Bio Prime Agrisolution, Pvt. Ltd. Pune)

iv) Shrikant Khapare –(Lupin Pharmaceuticals, Goa)

v) Swapnil Kamble –(AIMCO Pesticides, Chiplun)

vi) Mayuri Varne -(PI Industries, Rajasthan)

vii) Vishal Patane -(PI Industries, Rajasthan)

viii) Shubham Jagtap –(PCI, Pune)

ix) Onkar Nalawade –(UPL Ltd, Gujrat)

x) Avinash Malkar –(Adama India Pvt. Ltd., Hyderabad)

xi) Ajinkya Nimbalkar–(PCI, Pune)

xii) Supriya Savratkar –(Teva Pharmaceuticals, Goa)

15) Future roadmap of the department.

- **Curriculum Development:**
  - Modification of M. Sc. And M. Phil. Syllabus
  - Value added course will be conducted.
- **To enhance the research components:**
  - Synthesis of Pheromones
  - Isolation of Bio-pesticides from plant products
  - Rearing of Bio-control agents
  - Plant Disease forecasting

16) Media coverage of the Department.