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PHONE : EPABX-2609000 **website-** <u>www.unishivaji.ac.in</u> FAX 0091-0231-2691533 & 0091-0231-2692333 – BOS - 2609094

शिवाजी विद्यापीट, कोल्हापूर – 416004.

दुरध्वनी (ईपीएबीएक्स) २६०९००० (अभ्यास मंडळे विभाग— २६०९०९४) फॅक्स : ००९१-०२३१-२६९१५३३ व २६९२३३३.e-mail:bos@unishivaji.ac.in

शिवाजी वि./अ.मं/ विज्ञान व तंत्रज्ञान/8719

दि.21/08/2019.

प्रति, वनस्पतीशास्त्र अधिविभागप्रमुख शिवाजी विद्यापीठ,कोल्हापूर.

विषय:- (GIAN) वित्तीय संस्थेअंतंर्गत Deployment of Allelopaty in Sustainable Agriculture कोर्सच्या अभ्यासकमाबाबत.

संदर्भ:- आपले दि.14/08/2019 रोजीचे पत्र.

महोदय,

आदेशान्वये आपणास कळविण्यात येते की, वनस्पतीशास्त्र अधिविभागामध्ये MHRD Scheme on Global Invitiative on Academic Network (GIAN) या वित्तीय संस्थेने मान्यता दिलेल्या Deployment of Allelopathy in Sustainable Agriculture या कोर्सच्या अभ्यासक्रमास विद्यापीठ अधिकार मंडळाने मान्यता दिली आहे.

उपरोक्त बाब सर्व संबंधित शिक्षक व विद्यार्थी यांच्या निदर्शनास आणून दयावी सदरचा अभ्यासक्रम <u>www.unishivaji.ac.in</u> (Online Syllabus) या संकेतस्थळावर उपलब्ध करणेत आलेले आहे. कळावे,

आपला विश्वासू,

उपकुलसचिव

प्रतः माहितीसाठी .

1. प्रभारी अधिष्ठाता,विज्ञान व तंत्रज्ञान विद्याशाखा

योग्य त्या पुढील कार्यवाहीसाठी

- 2. परीक्षक नियुक्ती विभाग
- 3. संलग्नता विभाग
- 4. संगणक विभाग
- 5. पात्रता विभाग
- 6. बी.एस्सी.परीक्षा विभाग

7. वनस्पतीशास्त्र अधिविभागप्रमुख — शिवाजी वि. / अ.मं / विज्ञान व तंत्रज्ञान / 8740

यांना योग्य त्या पुढील कार्यवाहीसाठी

दि.22/08/2019.

## MHRD Scheme on Global Initiative on Academic Network (GAIN)

## Courses Program

## **Deployment of Allelopathy in Sustainable Agriculture**

| COURSE 1: The sustainability? Understanding and Acting                          |                                                                                                                                                                                                       |  |
|---------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Overview:                                                                       | The course comprises the following sections: chronology, definitions,                                                                                                                                 |  |
|                                                                                 | sectors concerned with sustainability, responsibilities, conclusion                                                                                                                                   |  |
| Objectives:                                                                     | The course consists of defining sustainability, understanding it perfectly to be able to act. Showing also that the global ecological and social crisis finds its solution in sustainable development |  |
| Course details                                                                  | •                                                                                                                                                                                                     |  |
| Module A:                                                                       | chronology, definitions,                                                                                                                                                                              |  |
| Module B:                                                                       | sectors concerned with sustainability, responsibilities, conclusion                                                                                                                                   |  |
| Duration:                                                                       | 4 H                                                                                                                                                                                                   |  |
| COURSE 2: Allelopathy: history and definition                                   |                                                                                                                                                                                                       |  |
| Overview:                                                                       | The course consists of the following parts: chronology, definitions,                                                                                                                                  |  |
|                                                                                 | sectors concerned with allelopathy, conclusion                                                                                                                                                        |  |
| Objectives:                                                                     | To realize the history of allelopathy as a natural phenomenon which man                                                                                                                               |  |
|                                                                                 | has been aware of for centuries, but he has not given a qualifier to this                                                                                                                             |  |
|                                                                                 | phenomenon. And how scientists began to value it.                                                                                                                                                     |  |
| Course details                                                                  |                                                                                                                                                                                                       |  |
| Module A:                                                                       | chronology, definitions,                                                                                                                                                                              |  |
| Module B:                                                                       | sectors concerned with allelopathy, conclusion                                                                                                                                                        |  |
| Duration:                                                                       | 3 H                                                                                                                                                                                                   |  |
| Overview: The course consists of the following parts: Problems arising from the |                                                                                                                                                                                                       |  |
|                                                                                 | excessive use of pesticides, Weed Management, Fungi management, Insect management, Nematodes management, Soil management                                                                              |  |
| Objectives:                                                                     | The course highlights the different fields of research where alleopathy could/should be exploited                                                                                                     |  |
| Course details                                                                  | 1                                                                                                                                                                                                     |  |
| Module A:                                                                       | Problems arising from the excessive use of pesticides, Weed Management,                                                                                                                               |  |
| Module B:                                                                       | Fungi management, Insect management, Nematodes management, Soil management                                                                                                                            |  |
| Duration:                                                                       | 3 H                                                                                                                                                                                                   |  |
| COURSE 4: Allelopathy and polyploidy                                            |                                                                                                                                                                                                       |  |

| Overview:                                                                    | The course includes the following sections: definition of polyploidy, advantages and disadvantages of polyploidy, polyploidy and allelopathy, conclusion                                                |  |
|------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Objectives:                                                                  | The course shows how to increase the allelopathic potential of plants by polyploidy                                                                                                                     |  |
| Course details                                                               |                                                                                                                                                                                                         |  |
| Module A:                                                                    | definition of polyploidy, advantages and disadvantages of polyploidy,                                                                                                                                   |  |
| Module B:                                                                    | polyploidy and allelopathy, conclusion                                                                                                                                                                  |  |
| Duration:                                                                    | 3 H                                                                                                                                                                                                     |  |
| COURSE 5: Allelopathy and seed priming                                       |                                                                                                                                                                                                         |  |
| Overview:                                                                    | The course includes the following parts: definition of priming, different techniques used, advantages and disadvantages, use of plant extracts and allochemicals in seed priming, conclusion            |  |
| Objectives:                                                                  | Extend the use of allochemicals in all agriculture aspects                                                                                                                                              |  |
| Course details                                                               |                                                                                                                                                                                                         |  |
| Module A:                                                                    | Definition of priming, different techniques used, advantages and disadvantages,                                                                                                                         |  |
| Module B:                                                                    | Use of plant extracts and allochemicals in seed priming, conclusion                                                                                                                                     |  |
| Duration:                                                                    | 3 H                                                                                                                                                                                                     |  |
| Overview: The course includes the following parts: definition of sustainable |                                                                                                                                                                                                         |  |
| Overview.                                                                    | agriculture, principles of sustainable agriculture, producer and consumer responsibility, exploitation of allelopathy in sustainable agriculture                                                        |  |
| Objectives:                                                                  | Exploiting allelopathy in sustainable agriculture                                                                                                                                                       |  |
| Course details                                                               |                                                                                                                                                                                                         |  |
| Module A:                                                                    | definition of sustainable agriculture, principles of sustainable agriculture, producer and consumer responsibility,                                                                                     |  |
| Module B:                                                                    | exploitation of allelopathy in sustainable agriculture                                                                                                                                                  |  |
| Duration:                                                                    | 2 H                                                                                                                                                                                                     |  |
| COURSE 7: Allelopathy and organic agriculture                                |                                                                                                                                                                                                         |  |
| Overview:                                                                    | The course includes the following parts: definition of organic agriculture, principles of organic agriculture, producer and consumer responsibility, exploitation of allelopathy in organic agriculture |  |
| Objectives:                                                                  | Exploiting allelopathy in organic agriculture                                                                                                                                                           |  |
| Course details                                                               |                                                                                                                                                                                                         |  |
| Module A:                                                                    | definition of organic agriculture, principles of organic agriculture, producer and consumer responsibility                                                                                              |  |
| Module B:                                                                    | exploitation of allelopathy in organic agriculture                                                                                                                                                      |  |
| Duration:                                                                    | 2 H                                                                                                                                                                                                     |  |
| COURSE 8: Allelopathy and crop mixture                                       |                                                                                                                                                                                                         |  |

| Overview:                                | The course includes the following parts: definition of crop mixture,                                                                                                                               |  |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
|                                          | exploitation of allelopathy in crop mixture, exemples                                                                                                                                              |  |
| Objectives:                              | How to use the allelopathic potential of plants in crop mixture                                                                                                                                    |  |
| Course details                           |                                                                                                                                                                                                    |  |
| Module A:                                | definition of crop mixture, exploitation of allelopathy in crop mixture,                                                                                                                           |  |
|                                          | exemples                                                                                                                                                                                           |  |
| Module B:                                |                                                                                                                                                                                                    |  |
| Duration:                                | 2 H                                                                                                                                                                                                |  |
| COURSE 9: Allelopathy and crop rotation  |                                                                                                                                                                                                    |  |
| Overview:                                | The course includes the following parts: definition of crop rotation, exploitation of allelopathy in crop rotation, exemples                                                                       |  |
| Objectives:                              | How to use the allelopathic potential of plants in crop rotation                                                                                                                                   |  |
| Course details                           |                                                                                                                                                                                                    |  |
| Module A:                                | definition of crop rotation, exploitation of allelopathy in crop rotation, exemples                                                                                                                |  |
| Module B:                                |                                                                                                                                                                                                    |  |
| Duration:                                | 2 H                                                                                                                                                                                                |  |
|                                          | COURSE 10: Allelopathy and crop production                                                                                                                                                         |  |
| Overview:                                | The course includes the following parts: definition of crop production, exploitation of allelopathy in crop production, exemples                                                                   |  |
| Objectives:                              | How to use the allelopathic potential of plants in crop production                                                                                                                                 |  |
| Course details                           |                                                                                                                                                                                                    |  |
| Module A:                                | definition of crop rotation, exploitation of allelopathy in crop production, exemples                                                                                                              |  |
| Module B:                                |                                                                                                                                                                                                    |  |
| Duration:                                | 2 H                                                                                                                                                                                                |  |
| COURSE 11: Allelopathy and soil sickness |                                                                                                                                                                                                    |  |
| Overview:                                | The course includes the following parts: definition of the soil sickness, history, effect on microorganisms, effect on crop production, causes of soil sickness, allelochemicals in soil sickness, |  |
| Objectives:                              | Relationship between soil sickness and allelopathy                                                                                                                                                 |  |
| Course details                           |                                                                                                                                                                                                    |  |
| Module A:                                | definition of the soil sickness, history, effect on microorganisms, effect on crop production,                                                                                                     |  |
| Module B:                                | causes of soil sickness, allelochemicals in soil sickness,                                                                                                                                         |  |
| Duration:                                | 2 H                                                                                                                                                                                                |  |
| COURSE 12: Allelopathy of aquatic plants |                                                                                                                                                                                                    |  |
| Overview:                                | The course includes the following parts: Characteristics of aquatic plants,                                                                                                                        |  |

|                                                  | allelopathy of these plants, exemples                                                                                                                           |  |  |
|--------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| Objectives:                                      | Exploitation of aquatic bioresources                                                                                                                            |  |  |
| Course details                                   |                                                                                                                                                                 |  |  |
| Module A:                                        | Characteristics of aquatic plants, allelopathy of these plants, exemples                                                                                        |  |  |
| Module B:                                        |                                                                                                                                                                 |  |  |
| Duration:                                        | 2 H                                                                                                                                                             |  |  |
| COURSE 13: Methodology in allelopathy research 1 |                                                                                                                                                                 |  |  |
| Overview:                                        | The course includes the following parts: bioassays for plant-plant                                                                                              |  |  |
|                                                  | interactions, plant-microorganisms interactions, plant-phytophagous interactions                                                                                |  |  |
| Objectives:                                      | Description of bioassays to evaluate phytotoxicity of plant extracts                                                                                            |  |  |
| Course details                                   |                                                                                                                                                                 |  |  |
| Module A:                                        | bioassays for plant-plant interactions, plant-microorganisms interactions,                                                                                      |  |  |
| Module B:                                        | plant-phytophagous interactions                                                                                                                                 |  |  |
| Duration:                                        | 3 H                                                                                                                                                             |  |  |
| COURSE 14: Methodology in allelopathy research 2 |                                                                                                                                                                 |  |  |
| Overview:                                        | The course includes the following parts: description of methods to extract, purify and identify allelochemicals, dtermination of allelochemicals mode of action |  |  |
| Objectives:                                      |                                                                                                                                                                 |  |  |
| Course details                                   |                                                                                                                                                                 |  |  |
| Module A:                                        | description of methods to extract, purify and identify allelochemicals                                                                                          |  |  |
| Module B:                                        | dtermination of allelochemicals mode of action                                                                                                                  |  |  |
| Duration:                                        | 3 H                                                                                                                                                             |  |  |