



PLANT MOLECULAR BIOLOGY AND BIOTECHNOLOGY

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| Enrollment year | 2017/2018 |
| Academic year | 2018/2019 |
| Regulations | DM270 |
| Department | DEPARTMENT OF BIOLOGY AND BIOTECHNOLOGY "LAZZARO SPALLANZANI" |
| Course | |
| Curriculum | PERCORSO COMUNE |
| Year of study | 2° |
| Period | 2nd semester (01/03/2019 - 14/06/2019) |
| ECTS | 6 |
| Language | English |

The activity is split

504226 - PLANT MOLECULAR BIOLOGY AND BIOTECHNOLOGY - I

504227 - PLANT MOLECULAR BIOLOGY AND BIOTECHNOLOGY - II



PLANT MOLECULAR BIOLOGY AND BIOTECHNOLOGY - I

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|--------------------------------|---|
| Enrollment year | 2017/2018 |
| Academic year | 2018/2019 |
| Regulations | DM270 |
| Academic discipline | BIO/04 (PLANT PHYSIOLOGY) |
| Department | DEPARTMENT OF BIOLOGY AND BIOTECHNOLOGY "LAZZARO SPALLANZANI" |
| Course | |
| Curriculum | PERCORSO COMUNE |
| Year of study | 2° |
| Period | (01/03/2019 - 14/06/2019) |
| ECTS | 3 |
| Lesson hours | 24 lesson hours |
| Language | |
| Activity type | ORAL TEST |
| Teacher | BALESTRAZZI ALMA (titolare) - 1.5 ECTS BALESTRAZZI ALMA (titolare) - 1.5 ECTS DE SOUSA ARAUJO SUSANA - 1.5 ECTS |
| Prerequisites | =Basic knowledge molecular and cellular biology is required. |
| Learning outcomes | =This part of the course aims at highlighting the molecular aspects of plant meristem activity and key molecular players (genes, proteins, phytohormones) in plant totipotency. |
| Course contents | Molecular aspects of plant cell totipotency. Shoot and root apical meristems (SAM, RAM): identity, activity, response to stress. Molecular cross-talk between phytohormones. |
| Teaching methods | Frontal lessons |
| Reccomended or required | no text books are suggested but specialized articles on international |

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| readings | scientific journals |
| Assessment methods | Written essay and oral exam |
| Further information | Written essay and oral exam |
| Sustainable development goals - Agenda 2030 | <u>\$bl legenda sviluppo sostenibile</u> |



PLANT MOLECULAR BIOLOGY AND BIOTECHNOLOGY - II

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| Enrollment year | 2017/2018 |
| Academic year | 2018/2019 |
| Regulations | DM270 |
| Academic discipline | BIO/04 (PLANT PHYSIOLOGY) |
| Department | DEPARTMENT OF BIOLOGY AND BIOTECHNOLOGY "LAZZARO SPALLANZANI" |
| Course | |
| Curriculum | PERCORSO COMUNE |
| Year of study | 2° |
| Period | (01/03/2019 - 14/06/2019) |
| ECTS | 3 |
| Lesson hours | 24 lesson hours |
| Language | |
| Activity type | ORAL TEST |
| Teacher | MACOVEI ANCA - 3 ECTS |
| Prerequisites | Basic knowledge molecular and cellular biology is required |
| Learning outcomes | This part of the course aims at highlighting the importance of plant biotechnology, providing past and current approaches in plant genetic modification (GM) technology of high impact for the agro-economic sectors |
| Course contents | Plant biotechnology: classification and impact. Genetically Modified Plants: technology and essential applications. Molecular farming: use of plants for the production of relevant biomolecules |
| Teaching methods | Frontal lessons |
| Recommeneded or required readings | Specialized articles on international scientific journals are suggested instead of text books |

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| Assessment methods | Written essay and oral exam |
| Further information | Written essay and oral exam |
| Sustainable development goals - Agenda 2030 | \$lbl_legenda_sviluppo_sostenibile |