# DISCIPLINE DESCRIPTION

## 1. Information on the study programme

| 1.1 Academic institution | **UNIVERSITY OF ORADEA** |
|---|---|
| 1.2 Faculty | **FACULTY OF ENVIRONMENTAL PROTECTION** |
| 1.3 Department | **ENGINEERING OF FOOD PRODUCTS** |
| 1.4 Field of study | **CONTROL AND EXPERTISE OF FOOD PRODUCTS** |
| 1.5 Cycle of study | **BACHELOR** |
| 1.6 Study programme/Qualification | **TECHNOLOGY OF AGRICULTURAL PRODUCTS PROCESSING/ENGINEER** |

## 2. Information on the discipline

| 2.1 Name of discipline | APPLIED INFORMATICS | | | | | | |
|---|---|---|---|---|---|---|---|
| 2.2 Course holder | Prof. PhD. Eng. CURILĂ MIRCEA | | | | | | |
| 2.3 Seminar/Laboratory/Project holder | Assist.PhD. TODEA ADELA | | | | | | |
| 2.4  Year of study | I | 2.5 Semester | I | 2.6 Type of evaluation | Exam | 2.7 Regime of discipline | C |

(C) Compulsory; (O) Optional; (E) Elective

## 3. Total estimate time (hours per semester of didactic activities)

| 3.1  Number of hours per week | 4 | out of which: 3.2 course | 2 | out of which 3.3 seminar/laboratory/project | 2 |
|---|---|---|---|---|---|
| 3.4 Total hours in the curriculum | 56 | out of which: 3.5 course | 28 | out of which 3.6 seminar/laboratory/project | 28 |

| Time allotment | h |
|---|---|
| Study assisted by manual, course support, bibliography and notes | 15 |
| Additional documentation in the library/ on specialised electronic platforms and in the field | 10 |
| Preparation of seminars/laboratories/ topics/reports, portfolios and essays | 10 |
| Tutorship | 5 |
| Examinations | 4 |
| Other activities.................................. | - |

| **3.7 Total hours of individual study** | **44** |
|---|---|
| **3.9 Total hours per semester** | **100** |
| **3.10 Number of credits** | **4** |

## 4. Pre-requisites (where appropriate)

| 4.1 curriculum | - |
|---|---|
| 4.2 competences | - |

## 5. Conditions (where appropriate)

| 5.1.  related to course | projector |
|---|---|
| 5.2. related to seminar/laboratory/ project | |

| 6. Specific competences acquired | |
|---|---|
| Professional competences | C5.1 Definition and use of specific engineering terminology in connection with multidisciplinary terminology specific to the field of environmental engineering<br>C4.3 Hierarchy of information for compiling and completing databases in the field of biotechnical and ecological systems |
| Transversal competences | CT1. Identifying and compliancing the norms of professional ethics and deontology, assuming the responsibilities for the decisions taken and the related risks<br>CT3. Efficient use of information sources and of assisted communication and professional training resources (portals, Internet, specialized software applications, databases, online courses, etc.) both in Romanian and in an international language |

**7.Objectives of discipline** (coming from the specific competencesacquired)

| 7.1 General objective | The courses cover the creation and management of relational databases using the Microsoft Access application. For this purpose, the construction of tables containing database information, the creation of forms that facilitate data entry and examination, queries for selecting and sorting data from tables, preparing reports for examining and printing information from the database and defining the relationships between tables for build complex forms, reports and queries. Theoretical notions presented in the course will be practically exemplified in the laboratory classes. |
|---|---|
| 7.2 Specific objectives | **1. Theoretical knowledge - Knowledge and understanding**<br>- Assimilation of basic concepts for approaching databases in the context of the relational model,<br>- Acquiring knowledge about techniques and methods for designing applications with relational databases<br>**2. Acquired skills - Explanation and interpretation**<br>- Explanation and interpretation of the database, projects, processes, as well as the theoretical and practical contents of the database<br>- Development of the capacity to evaluate the results of a requirements analysis<br>- Development of the capacity to evaluate the performance of a database<br>**3. Acquired abilities - Instrumental-applied**<br>- Training skills to build conceptual and logical models<br>- Designing tables<br>- Establishing relationships between tables<br>- Design of forms<br>- Designing interrogation reports<br>- Acquiring the use of relational database management systems in the context of current trends in the field.<br>**4. Attitudinal**<br>- Formation of a positive and responsible behavior both for the economic importance and for the environment.<br>- Creative capitalization of one's own potential in student scientific activities (participation in scientific symposia, articles in academic publications).<br>- Awareness of the importance of training during the semester to achieve good and lasting results.<br>- Awareness of the importance of one's own search, documentation and research related to learning.<br>- Team spirit.<br>- Cultivating a discipline of work done correctly and on time |

**8. Contents*/**

| 8.1 Course | Methods of teaching | No. of hours/Remarks |
|---|---|---|
| Basic notions about databases<br>    The component parts of an Access database<br>        Tables. Forms. Queries. Reports. | | 2 |
| Creating a new database in Access<br>    Creating a database from a template<br>    Creating an empty database | | 2 |
| Creating tables in a database<br>    Create a table in Datasheet view mode<br>        Adding fields in Datasheet view mode | | 2 |
| Create a table in Design view<br>    The data type of a field and its properties<br>    Setting the primary key<br>Creating a table using a template<br>Creating a new table by importing or linking to external data<br>Create a table based on a SharePoint list | | 2 |
| Relationships between tables<br>    Creating a table relationship<br>    Modifying a table relationship<br>    Imposing referential integrity | The course is presented to students in the form of a lecture. The video projector and the laptop are used to present the slides that outline the mentioned course elements. Thus, the lecture allows student intervention for a better understanding of the notions presented by the professor | 2 |
| Creating a simple form<br>    Field List panel<br>    Adding fields to a form or report using the Field List Panel<br>    Insert in a form or report a title, a logo, the page number | | 2 |
| Adding fields to a form or report in Design view<br>    Moving and resizing controls<br>    Add a text box control to a form or report | | 2 |
| Create a checklist using a list box or a combo box<br>    Display Yes / No values using check boxes, option buttons, and toggle buttons | | 2 |
| Searching for information in a database<br>    Browsing records<br>    Search for specific records<br>        Finding and replacing data in a table<br>        Finding and replacing data in a form | | 2 |
| Sort records<br>    Sort a report<br>    Sort a table, query, or form | | 2 |
| Filtering records<br>    Ordinary filters<br>    Selection-based filters<br>    Filter by form<br>    Complex filtration | | 2 |
| Finding records using a query<br>    Create a simple query<br>    Query criteria | | 2 |
| Create a simple report<br>    Create a report using the Report tool<br>    Create a report using the Report wizard | | 2 |

| | | |
|---|---|---|
| Creating labels using the Label wizard | | |
| Create a report using the Blank Report tool<br>   Establish report details in Appearance view<br>   Establish report details in Design view<br>       Adding fields from the Field List panel<br>   Adding controls to the report<br>Viewing the report<br>Print the report | | 2 |

Bibliography
1. Mircea Curilă - Applied Informatics, University of Oradea, 2015.
2. Mircea Curilă, Adrian Hava - Database management with Access, University of Oradea Publishing House, 2008.
3. Roger Jennings - All About Microsoft Access 2000, Theory 2000 Ed.
4. Joe Habracken - Access 2002 for beginners, Teora Publishing House 2002.

| 8.3 Laboratory | Methods of teaching | No. of hours/ Remarks |
|---|---|---|
| 1. Basic notions about databases.<br>   The component parts of an Access database. | | 2 |
| 2. Create a database from a template.<br>   Creating an empty database. | | 2 |
| 3. Creating tables.<br>   Create a table in Datasheet view mode. | | 2 |
| 4. Create a table in Design view.<br>   Create a table by using a template, importing, or linking to external data, based on a SharePoint list. | | 2 |
| 5. Relationships between tables.<br>   Imposing referential integrity. | In the first part there is a short professor-student debate followed by practical demonstrations of the notions corresponding to the theme of the work practice. Then the students perform practical exercises similar to those presented, being assisted during this time. | 2 |
| 6. Create a simple form.<br>   Adding fields to a form or report using the Field List Panel. | | 2 |
| 7. Add fields to a form or report in Design view.<br>   Add a text box control to a form or report. | | 2 |
| 8. Create a checklist using a list box or a combo box.<br>   Display Yes / No values using check boxes, option buttons, and toggle buttons. | | 2 |
| 9. Searching for information in a database.<br>   Browsing records. Find and replace data in a table and form. | | 2 |
| 10. Sort records.<br>   Sort a report, table, query and form. | | 2 |
| 11. Filtering records.<br>   Ordinary filters, based on selection, by form, complex. | | 2 |
| 12. Finding records using a query.<br>   Create a simple query. | | 2 |
| 13. Create a report using the Report tool and the Report wizard.<br>   Creating labels using the Label wizard. | | 2 |
| 14. Create a report using the Incomplete Report tool.<br>   View and Print the report. | | 2 |

Bibliography
1. Mircea Curilă - Applied Informatics, University of Oradea, 2015.
2. Mircea Curilă, Adrian Hava - Database management with Access, University of Oradea Publishing House, 2008.

| | |
|---|---|
| 3. Roger Jennings - All About Microsoft Access 2000, Theory 2000 Ed. | |
| 4. Joe Habracken - Access 2002 for beginners, Teora Publishing House 2002. | |

* The content, respectively the number of hours allocated to each course / seminar / laboratory / project will be detailed during the 14 weeks of each semester of the academic year.

## 9. Corroboration of discipline content with the expectationsof the epistemic community, professional associations and representative employers from the field corresponding to the study programme

The content of the discipline is found in the curriculum of the specialization of Technology of Agricultural Products Processing and from other university centers that have accredited this specialization.

## 10. Evaluation

| Type of activity | 10.1 Evaluation criteria | 10.2 Evaluation methods | 10.3 Percentage of the final grade |
|---|---|---|---|
| 10.4 Course | In order to obtain grade 5, the following conditions must be met:<br>- obtaining at least a grade of 5 in the laboratory test;<br>- knowledge of the basic notions presented in the course.<br>In order to obtain grades 6, 7, 8 or 9, the students will present two subjects extracted from the package prepared with subjects that contain notions of course. Depending on the ability to understand and describe the respective notions, they receive the corresponding grade.<br>In order to obtain a grade of 10, the following conditions must be met:<br>- obtaining a grade of 10 in the laboratory test;<br>- knowledge of all the topics presented in the course. | Oral | 70% |
| 10.5 Seminar | | | |
| 10.6 Laboratory | | Practically | 30% |
| 10.7 Project | | | |
| 10.8 Minimum standard of performance | | | |
| Knowledge and understanding of courses at the level of essential principles and results | | | |

| Date of completion | Signature of course holder** | Signature of seminar laboratory/project holder ** |
|---|---|---|
| 10.09.2020 | **Prof.PhD.Eng. CURILĂ MIRCEA**<br>e-mail: mcurila@uoradea.ro | **Assist.PhD. TODEA ADELA**<br>e-mail: aventer@uoradea.ro |

Date of approval in the department                                 Signature of the Head of Department

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