DISCIPLINE FILE English Language

1. Program information

| | r rogram imom | | • • | | | | | | | | |
|-----|-----------------------------------|-------|-------|----------|---|-----------------------|--------------------|--------|-----|-----------------------|---|
| 1.1 | Higher education institution | | | | Ur | University of Pitesti | | | | | |
| 1.2 | Faculty | | | | | Me | echanics and Techr | nology | | | |
| 1.3 | Department | | | | | Aι | tomobiles and Trar | nsport | | | |
| 1.4 | Field of studies | ; | | | | Αι | tomotive Engineeri | ng | | | |
| 1.5 | Cycle of studies | | | Ma | aster | | | | | | |
| 1.6 | Program of study / Qualification | | | Αι | Automotive Engineering for Sustainable Mobility | | | | | | |
| 2. | Discipline info | mati | on | | | | | | | | |
| 2.1 | Name of discipl | ine | | | | Engl | ish Language | | | | |
| 2.2 | Teacher of the | cours | e act | ivities | | | | | | | |
| 2.3 | Teacher of the seminar activities | | | Ung | Ungureanu Cristina | | | | | | |
| 2.4 | Year of the studies | I | 2.5 | Semester | I | 2.6 | Type of evaluation | V | 2.7 | The discipline regime | 0 |
| | Estimated total | | 1 | | | | | | | | |

| | 3. Estimated total time | | | | | | | |
|------------------|---|----|-----|-------------------|---|-----|---------|-------|
| 3.1 | Number of hours per week | 2 | 3.2 | from which course | - | 3.3 | seminar | 2 |
| 3.4 | Total hours of the Academic Syllabus | 28 | 3.5 | from which course | - | 3.6 | seminar | 28 |
| Distr | Distribution of the time allocated to the individual study | | | | | | | hours |
| Study | Study by handbook, course support, bibliography and notes | | | | | | 30 | |
| Addit | Additional documentation in the library, on specialized electronic platforms and in the field | | | | | | | 30 |
| Prepa | Preparation of seminars / laboratories, topics, reports, portfolios, essays | | | | | | 40 | |
| Tutor | Tutorial | | | | | | 4 | |
| Examinations | | | | | | 4 | | |
| Other activities | | | | | | | | |

| 3.7 | Total hours of individual study | 22 |
|-----|---|----|
| 3.8 | Total hours per semester ² | 50 |
| 3.9 | Number of credits allocated to the discipline | 2 |

4. Preconditions (where applicable)

| 4.1 | Curriculum | Not applicable |
|-----|------------|--|
| 4.2 | Skills | Level of linguistic competence B1 according to the Common European Framework of Reference for Languages. |

5. Conditions (where applicable)

| 5.1 | for the course | Classroom equipped with board, video projector, projection screen, computer |
|-----|-----------------|---|
| 5.2 | For the seminar | Classroom equipped with board, video projector, projection screen, computer |

6. Specific skills acquired

Professional skills

- To acquire the necessary competence to communicate, orally or in writing, in different professional or sociocultural contexts, through messages with medium complexity;
- To develop individual learning strategies in order to improve their linguistic competence, including multilingual one, according to their specific needs, through teamwork or autonomy;
- To identify and use the language tools essential to the profession they are prepared for through the study program followed;
- To deepen their fundamental notions about British and European civilization
- -To raise awareness of the cultural differences reflected in the language and their impact on professional interactions.

transversal skills

8.2. Seminar

Through the level of language acquired at the end of the course, the student is able to understand the main ideas of complex texts on concrete and abstract topics, including technical discussions. He is able to communicate with a certain degree of spontaneity and fluency specific to a native speaker. He can act and carry out professional tasks, in its specialized environment, based on linguistic communication. He can use language effectively in social, professional or academic life.

7. Objectives of the discipline

| 7.1 The main objective of the discipline | The general objective of the discipline is to deepen the main notions of thermodynamics and their application in concrete cases concerning the theoretical and practical study of thermal machines. |
|--|--|
| 7.2 Specific objectives | - To deepen and apply the theory of thermogasodynamics by applying the basic equations of the gas and vapor flow, the calculation of the different types of nozzles, the calculation of the gas flow parameters under different conditions; calculation of the boundary layer parameters; - Deepening the theory of heat transfer with applications in the thermal management of internal combustion engines; - Deepening the theory of energy conversion. Practical applications for automobiles. Rankine Cycle. Seeback Effect. Peltier Effect |

| ŏ. | Contents | | | |
|----|----------|---|---|----|
| | | | | |
| | | | | Į. |
| | | 1 | ı | |

No.

Teaching

Remarks

| | | hours | methods | Resources used |
|----|--|-------|-------------------------------|-------------------------|
| 1 | Mathematics for Engineers: Review of Fundamental Concepts | 2 | - Lecture | board. |
| 2 | Basic Concepts of Mechanics | 4 | - Exposure with | sketches. |
| 3 | Sustainable Mobility. Environmental Awareness | 4 | support material | tables, graphs, |
| 4 | Materials Technology | 2 | - Explication | sheets, photos, |
| 5 | Mid-Term Evaluation | 2 | - Description | models, video |
| 6 | Energy Conversion and Storage in Transport | 2 | and exemplification | projector, computer, |
| 7 | Vehicle Energy and Fuel Consumption | 4 | - The heuristic | internet |
| 8 | Performance and Technical Specifications | 2 | conversation | |
| 9 | Active and Passive Safety Features. Car Recalls | 2 | - Debate | |
| 10 | The Design Process. Expanding the Product Range Evaluation | 2 2 | - State the problem -Exercise | |
| | TOTAL Hours | 28 | | |

Minimal bibliography:

Schmitt, Diane, Schmitt, Norbert, Focus on Vocabulary 2, Pearson, 2011

Ibbotson, Mark, Cambridge English for Engineering, Cambridge, 2011

Mann, Malcolm, Taylore-Knowles, Steve, Destination C1 and C2, MacMillan, 2014

Freeman, H.G. and Glass G., Dictionar tehnic englez-român/român-englez, Editura Niculescu, 2008.

Glendinning, Eric and Norman Glendinning, Oxford English for Electrical and Mechanical Engineering, Oxford University Press. 2008.

Ibbotson, Mark, Professional English in Use Engineering with Answers: Technical English for Professionals, Cambridge University Press, 2009.

9. Corroboration the contents of the discipline with the expectations of the epistemic community representatives, professional associations and employers in the field related to the program

Through the level of language acquired at the end of the course, the student is able to understand the main ideas of complex texts on concrete and abstract topics, including technical discussions. He is able to communicate with a certain degree of spontaneity and fluency specific to a native speaker. He can act and carry out professional tasks, in its specialized environment, based on linguistic communication. He can use language effectively in social, professional or academic life.

10. Evaluation

| Activity type | 10.1 Evaluation Criteria | 10.2 Evaluation methods | 10.3 Percentage of the final grade |
|--|---|---|------------------------------------|
| 10.4 Course | | | |
| 10.5 Seminar | Involvement in activity throughout the semester | Questions / answers. Individual | 30% |
| 10.5 Seminar | Periodical assessement | discussions | 30% |
| 10.6. Homework | Correct resolution. Quality of presentation | Oral presentation. Individual discussions | 30% |
| 10.6 Minimum standard of performance | Determining the type of gas flow in a posigning / checking a nozzle Evaluation of pressure losses in a piper. | • | |

Date completed Course teaching Seminar teaching
17.09.2019 Assoc. Prof. Cristina Ungureanu

Date of approval in the Department Council, 18.09.2019

Head of department, (supplier) Assoc. Prof. Laura Cîţu Head of department DAT,
Adrian CLENCI, prof. dr. ing.

DISCIPLINE FILE English Language

| 1. | Program information | | | 9 | | 99- | | | | | |
|---|---|--|---|---|--|---|------------------------------------|------------------------|--------------------|--------------|---------|
| 1.1 | Higher education insti | tution | | | iversity of I | | | | | | |
| 1.2 | Faculty | | | Me | chanics ar | d Techn | | | | | |
| 1.3 | Department | | | | tomobiles a | | | | | | |
| 1.4 | Field of studies | | | Au | tomotive E | ngineerir | ng | | | | |
| 1.5 | Cycle of studies | | | | ıster | | | | | | |
| 1.6 | Program of study / Qu | | | Au | tomotive E | ngineerir | ng for Sus | tainable l | Mobility | | |
| 2. | Discipline information | 1 | | | | | | | | | |
| 2.1 | Name of discipline | | | Engl | ish Langua | ge | | | | | |
| 2.2 | Teacher of the course | activities | | | | | | | | | |
| 2.3 | Teacher of the semina | r activities | | Ungı | ıreanu Cris | stina | | | | | |
| 2.4 | Year of the | E Comoo | ter II | 2.6 | Type of | | V | 2.7 | The discip | oline | |
| 2.4 | studies 1 2 | .5 Semes | ter III | 2.0 | evaluation | | V | 2.7 | regime | | 0 |
| 3. | Estimated total time | | | | | | | | | | |
| 1 Num | ber of hours per week | | 2 | 3.2 | 2 from w | hich cou | rse - | 3.3 | 3 | seminar | |
| | I hours of the Academic | Svllabus | 28 | 3.5 | 5 from w | hich cou | rse - | 3.0 | 3 | seminar | 2 |
| | on of the time allocate | | dividual | study | | | | | | | ho |
| | andbook, course suppo | | | | | | | | | | 3 |
| | documentation in the lik | | | | | rms and | in the fie | ld | | | 3 |
| | n of seminars / laborato | | | | | | III tile lie | iu | | | 4 |
| orial | ii oi seiiiiiais / laborato | ries, topics | , reports, | porti | ulius, essa | ys | | | | | |
| | nno. | | | | | | | | | | |
| aminatio | | | | | | | | | | | - ' |
| | vities | 1 | | | 00 | | | | | | |
| | tal hours of individual st | | | | 22 | | | | | | |
| | tal hours per semester | | | | 50 | | | | | | |
| _ | mber of credits allocate | ted to the | | | 2 | | | | | | |
| | scipline | | | | |] | | | | | |
| 4. | Preconditions (where | applicable | ∍) | | | | | | | | |
| 4.1 | Curriculum | Not app | | | | | | | | | |
| 4.2 | Chille | Level o | f linguisti | c cor | npetence E | 31 accor | ding to tl | ne Comm | on Europe | an Frame | work of |
| 4.2 | Skills | Referen | ice for La | ngua | ges. | | • | | • | | |
| 5. | Conditions (where ap | | | | | | | | | | 4 |
| 5.1 | for the course | , ,, | Classro | om e | guipped wit | h board. | video pro | piector, pr | ojection sci | reen, comp | uter |
| 5.2 | For the seminar | | | | | | | | ojection sci | | |
| 6. | Specific skills acquire | \d | Olabbio | 0111 01 | quipped Wit | ii boara, | viaco pre | Jootoi, pi | ojeotion so | con, comp | outoi |
| Professional skills | To acquire the neccultural contexts, thr To develop individuone, according to th To identify and use program followed; To deepen their furence awareness interactions. | ough mess ual learning eir specific e the languandamental | sages with g strategion needs, thage tools notions a | h med es in d nroug esse lbout | dium complorder to implet to implet to implet to the natial to the British and | lexity; prove the cor autor profession | eir linguist nomy; on they a | ic compe re prepar | tence, inclu | ding multili | ingual |
| trai | Through the level of language acquired at the end of the course, the student is able to understand the main ideas of complex texts on concrete and abstract topics, including technical discussions. He is able to communicate with a certain degree of spontaneity and fluency specific to a native speaker. He can act and carry out professional tasks, in its specialized environment, based on linguistic communication. He can use language effectively in social, professional or academic life. | | | | | | | | | | |
| 7. | Objectives of the disc | ipline | | | | | | | | | |
| 7.1 | The main objective of th | e discipline | theri theo | mody retica | namics and Il and pract | their ap | plication y of therm | in concre nal machi | | ncerning th | ne |
| 7.2 Specific objectives 7.2 Pecific objectives 7.2 Pecific objectives - Decific objectives | | | | deepen and apply the theory of thermogasodynamics by applying the ic equations of the gas and vapor flow, the calculation of the different es of nozzles, the calculation of the gas flow parameters under different ditions; calculation of the boundary layer parameters; epening the theory of heat transfer with applications in the thermal nagement of internal combustion engines; epening the theory of energy conversion. Practical applications for omobiles. Rankine Cycle. Seeback Effect. Peltier Effect | | | | | ent erent al | | |
| 8. | Contents | | auto | | .co. raman | J Jyolo. | JUJUUN | | CAUCA ENOUG | | |
| 0. | CONTENTS | | | | | - | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | 1 | | | |
| | | | | | | | | | | | |

| 8.2. | 8.2. Seminar | | Teaching | Remarks | |
|------|---|-------|-----------------------------------|-------------------------|--|
| 0.2. | | hours | methods | Resources used | |
| 1 | Prospects for a Sustainable Aluminium Industry | 2 | - Lecture | | |
| 2 | Waste Reduction in Materials Manufacturing | 2 | Exposure with | | |
| 3 | Environmentally Conscious Materials and Chemical Processing | 2 | support material | | |
| 4 | The Four Cycles of an Engine. Air and Fuel | 2 | - Explication | board, | |
| 5 | Outputs (Fuel Injectors, Fuel Pump) | 2 | - Description | sketches, | |
| 6 | Mid-Term Evaluation | 2 | and | tables, graphs, | |
| 7 | Ignition (Burn Rate) | 2 | exemplification | sheets, photos, | |
| 8 | Automatic Transmissions | 2 | - The heuristic | models, video | |
| 9 | IC (International Combustion)-Engine-Based Propulsion | 2 | conversation | projector, computer, | |
| 3 | Systems | | - Debate | internet | |
| 10 | Electric and Hybrid-Electric Propulsion Systems | 2 | - State the | miemei | |
| 11 | Renewable Energies for Powering Fuel Cell Vehicles | 2 | problem | | |
| 12 | Manual and Automatic Transmission | 2 | -Exercise | | |
| 13 | Cars of the Future: Developments in Chassis, Drivetrains and Body Engineering | 2 | | | |
| 14 | Introduction to Mechatronics and Measurement Systems | 2 | | | |
| | TOTAL Hours | 28 | | | |

Minimal bibliography:

Schmitt, Diane, Schmitt, Norbert, Focus on Vocabulary 2, Pearson, 2011

Ibbotson, Mark, Cambridge English for Engineering, Cambridge, 2011

Mann, Malcolm, Taylore-Knowles, Steve, Destination C1 and C2, MacMillan, 2014

Freeman, H.G. and Glass G., Dictionar tehnic englez-român/ român-englez, Editura Niculescu, 2008.

Glendinning, Eric and Norman Glendinning, Oxford English for Electrical and Mechanical Engineering, Oxford University Press, 2008.

Ibbotson, Mark, Professional English in Use Engineering with Answers: Technical English for Professionals, Cambridge University Press, 2009.

9. Corroboration the contents of the discipline with the expectations of the epistemic community representatives, professional associations and employers in the field related to the program

Through the level of language acquired at the end of the course, the student is able to understand the main ideas of complex texts on concrete and abstract topics, including technical discussions. He is able to communicate with a certain degree of spontaneity and fluency specific to a native speaker. He can act and carry out professional tasks, in its specialized environment, based on linguistic communication. He can use language effectively in social, professional or academic life.

10. Evaluation

| Activity type | 10.1 Evaluation Criteria | 10.2 Evaluation methods | 10.3 Percentage of the final grade | | | |
|----------------|--|---|------------------------------------|--|--|--|
| 10.4 Course | | | | | | |
| 10.5 Seminar | Involvement in activity throughout the semester | Questions / answers. Individual | 30% | | | |
| 10.5 Seminar | Periodical assessement | discussions | 30% | | | |
| 10.6. Homework | Correct resolution. Quality of presentation | Oral presentation. Individual discussions | 30% | | | |
| 10.6 Minimum | - Determining the type of gas flow in a pipeline | | | | | |
| standard of | - Designing / checking a nozzle | | | | | |
| performance | - Evaluation of pressure losses in a pipe | е | | | | |

Date completed Course teaching Seminar teaching
17.09.2019 Seminar teaching
Assoc. Prof. Cristina Ungureanu

Date of approval in the Department Council, 18.09.2019

Head of department, (supplier) Assoc. Prof. Laura Cîtu

Head of department DAT,

Adrian CLENCI, prof. dr. ing.