| | |
|---|---|
| **Course title** | Decision Theory |
| **Course title in polish** | Teoria podejmowania decyzji |
| **Course for discipline:** | Management and Quality Sciences |

| | | | | | |
|---|---|---|---|---|---|
| **Semester:** | 3 | **Status of course:** | faculty | **Language:** | english |
| **Academic year:** | | **Catalog number:** | | | |

| | |
|---|---|
| **Coordinator of course:** | Dr inż. Monika Gębska |
| **Lecturer od course:** | Dr inż. Monika Gębska |
| **Executing unit:** | Management Institute |
| **Ordering unit:** | Doctoral School SGGW |
| **Assumptions, goals and description of the course:** | Assumptions and goals:<br>a. Familiarization with the issues of decision theory.<br>b. Acquaintance with the psychology of decision-making<br>c. Familiarization with the tools used to support the decision-making process<br>Description of the course:<br>1. Decision, classification and types of decisions. Problem and problem situation. Classification and types of problems.<br>2. Rational and behavioural model of decision-making. Multidimensionality of decision effects. The concept of utility, utility function and curves, expected utility.<br>3.Value system and decisions. Aspirations and decisions. Psychological pitfalls of decision-making.<br>4. Decision-making styles and models. Advantages and disadvantages of individual and group decision making - Vroom and Jago model.<br>5. Decision-making group, selecting a team for tasks. Team life curve. Team roles. Team communication.<br>6. The role of personality in decision-making.<br>7. Probability theory - basics, decision-making in conditions of uncertainty and risk - Wald, Hurwicz, Savage, Laplace criteria, expected monetary value method.<br>8. Decision-making rules. Traditional and modern decision-making techniques. Decision tree.<br>9. Assessment approaches. Scoring technique. Paired comparison technique. Weighted scoring technique. Multi-criteria assessment.<br>10. Game theory in decision-making. |
| **Didactic form, number of hours:** | Tutorials, 10h |
| **Teaching methods:** | Lecture, discussion, problem-solving, case study, simulation games |

**Learning outcomes**

| **KNOWLEDGE - the graduate knows and understands:** | **SKILLS - the graduate is able to:** | **COMPETENCES - the graduate is ready to:** |
|---|---|---|
| To the extent enabling to revise the existing pradigms in the field/discipline - the world achievments, gathering theoretical background as well as general and selected detailed issues | Carry out critical assessment of the scientific research findings and expert activities and their contribution to the knowledge development in the field/discipline | Critically evaluate the achievments in the field/discipline represented |
| Major general development trends in the field/discipline | | Recognise knowledge in solving cognitive and practical problems characteristic for the area of research (field/discipline) and in an interdisciplinary aspect |
| | | Support the ethos of scientific circles and conduct independent research |

| | |
|---|---|
| **The method of verification of learning outcomes:** | Individual student's projects, oral exam, student's own work |
| **Form of documentation of achieved learning outcomes:** | Questions given during the oral exam, works done by each student, students projects |
| **Elements and weights of the final grade:** | Oral exam - 50%, evaluation of the work done as part of the student's own work - 20%, assessment of the project work - 30% |
| **Place of the course:** | Teaching room |

**Basic and supplementary literature**


1.Annie Duke , How to Decide: Simple Tools for Making Better Choices, 2020
2.Ariely D. 2011. Predictably Irrational, Revised and Expanded Edition: The Hidden Forces That Shape Our Decisions. Perennial
3.Edoardo Binda Zane. 2016. Effective Decision-Making: How To Make Better Decisions Under Uncertainty And Pressure. Published by CreateSpace Independent Publishing Platform
4.Heath C., Heath D. 2013. How to make better choices in life and work. Published by Crown Business, New York
5.Hirokawa R.Y., Poole M.S. 2012. Communication and Group Decision Making. Published by SAGE Publications, Inc.
6.Kahneman D. 2011. Thinking, Fast and Slow. Published by Farrar, Straus and Giroux


| | |
|---|---|
| **Comments:** | No comments |

| | |
|---|---|
| **Estimated number of hours of work of the doctoral student necessary to achieve the assumed learning outcomes:** | 10 h |

**Leraning outcomes reference to the second degree characteristics of the National Qualification Framework (level 8) covering doctoral competences**

| Symbol: | Learning outcomes: | 8 level NQF |
|---|---|---|
| SD1_KW01 | To the extent enabling to revise the existing pradigms in the field/discipline - the world achievments, gathering theoretical background as well as general and selected detailed issues | P8S_WG |
| SD1_KW02 | Major general development trends in the field/discipline | P8S_WG |
| SD1_KU05 | Carry out critical assessment of the scientific research findings and expert activities and their contribution to the knowledge development in the field/discipline | P8S_UW |
| SD1_KK01 | Critically evaluate the achievments in the field/discipline represented | P8S_KK |
| SD1_KK03 | Recognise knowledge in solving cognitive and practical problems characteristic for the area of research (field/discipline) and in an interdisciplinary aspect | P8S_KK |
| SD1_KK08 | Support the ethos of scientific circles and conduct independent research | P8S_KR |