



Subject card

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|---|--|--|--|-------------------------------------|---|--|---------|-----|
| Subject name and code | | Recording and Compression of Audio-video Signals, PG_00048138 | | | | | | |
| Field of study | | Electronics and Telecommunications | | | | | | |
| Date of commencement of studies | | October 2022 | Academic year of realisation of subject | | | 2025/2026 | | |
| Education level | | first-cycle studies | Subject group | | | Optional subject group Subject group related to scientific research in the field of study | | |
| Mode of study | | Full-time studies | Mode of delivery | | | at the university | | |
| Year of study | | 4 | Language of instruction | | | Polish | | |
| Semester of study | | 7 | ECTS credits | | | 3.0 | | |
| Learning profile | | general academic profile | Assessment form | | | exam | | |
| Conducting unit | | Department Of Multimedia Systems -> Faculty Of Electronics Telecommunications And Informatics -> Wydział Politechniki Gdańskiej | | | | | | |
| Name and surname of lecturer (lecturers) | | Subject supervisor | | dr inż. Piotr Ody | | | | |
| | | Teachers | | dr inż. Piotr Ody | | | | |
| Lesson types and methods of instruction | | Lesson type | Lecture | Tutorial | Laboratory | Project | Seminar | SUM |
| | | Number of study hours | 15.0 | 0.0 | 15.0 | 0.0 | 0.0 | 30 |
| | | E-learning hours included: 0.0 | | | | | | |
| Learning activity and number of study hours | | Learning activity | Participation in didactic classes included in study plan | Participation in consultation hours | Self-study | SUM | | |
| | | Number of study hours | 30 | 3.0 | 42.0 | 75 | | |
| Subject objectives | | Familiarize student with the issues of video and audio recording and the use of typical studio equipment. | | | | | | |
| Learning outcomes | | Course outcome | Subject outcome | | Method of verification | | | |
| | | [K6_W35] Knows the concepts of the technique of signal transmission, operation of telecommunications networks and multimedia services and the rules for providing them | Student chooses the type of studio devices interface depending on the needs. | | [SW1] Assessment of factual knowledge | | | |
| | | [K6_W03] knows and understands, to an advanced extent, the construction and operating principles of components and systems related to the field of study, including theories, methods and complex relationships between them and selected specific issues - appropriate for the curriculum | The student chooses the type of studio equipment for voice recordings. The student chooses the type of video equipment for video recording. | | [SW1] Assessment of factual knowledge | | | |
| | | [K6_W05] Knows and understands, to an advanced extent, methods of supporting processes and functions, specific to the field of study | The student uses computer tools for editing sound and movie. | | [SW1] Assessment of factual knowledge | | | |
| | | [K6_U05] can plan and conduct experiments related to the field of study, including computer simulations and measurements; interpret obtained results and draw conclusions | Student prepares a studio for sound and / or video recordings. | | [SU4] Assessment of ability to use methods and tools [SU1] Assessment of task fulfilment | | | |
| | | [K6_U07] can apply methods of process and function support, specific to the field of study | Student configures audio and video recording equipment depending on the needs. | | [SU4] Assessment of ability to use methods and tools [SU1] Assessment of task fulfilment | | | |

| Subject contents | <ol style="list-style-type: none"> 1. Introduction 2. Fundamentals of the digital signal recording techniques 3. Classification of the basic methods for sound and image recording and processing 4. Magnetic recording 5. Magneto-optical recording 6. Overview of video converters 7. Lenses, camcorders and digital photo-cameras 8. Video capture cards constructions and types 9. Video capture cards constructions and types 10. Studio audio devices (tape recorders, mix-consoles, hard disc recorders, effects and dynamics processors, synthesizers) 11. Studio video devices (VCRs, video consoles, hard disc video recorders) 12. Synchronization of audio-video devices 13. Audio and video formats 14. Test | | | | | | | | | | | |
|--|---|---|-------------------------------|--------------------------|---|-------------------------------|--------------------------|-----------------|-------|----------------------|----------------------------------|-------|
| Prerequisites and co-requisites | No requirements | | | | | | | | | | | |
| Assessment methods and criteria | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;">Subject passing criteria</th> <th style="width: 30%;">Passing threshold</th> <th style="width: 30%;">Percentage of the final grade</th> </tr> </thead> <tbody> <tr> <td>Practical exercise</td> <td>51.0%</td> <td>50.0%</td> </tr> <tr> <td>Exam</td> <td>51.0%</td> <td>50.0%</td> </tr> </tbody> </table> | | | Subject passing criteria | Passing threshold | Percentage of the final grade | Practical exercise | 51.0% | 50.0% | Exam | 51.0% | 50.0% |
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| Exam | 51.0% | 50.0% | | | | | | | | | | |
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| Recommended reading | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 40%;">Basic literature</td> <td colspan="2" data-bbox="794 613 1487 907"> Arnold J., Frater M., Pickering M., Digital Television, Wiley, 2007. Brinkman R., The Art and Science of Digital Compositing, Morgan Kaufman, 2008. Chapman N., Chapman J., Digital Multimedia, Wiley, 2009. Davis G., Jones R., Sound Reinforcement Handbook, Hal Leonard, 1989. Halsall F., Multimedia Communications, Addison-Wesley, 2001. Havaladar P., Medioni G., Multimedia Systems, Course Technology, 2010. Holman T., Sound for Digital Video, Focal Press, 2005. James J., Digital Intermediates for Film and Video, Focal Press, 2006. Watkinson J., The Art Digital Video, Focal Press, 2000. </td> </tr> <tr> <td>Supplementary literature</td> <td colspan="2" data-bbox="794 913 1487 952">No requirements</td> </tr> <tr> <td>eResources addresses</td> <td colspan="2" data-bbox="794 958 1487 981">Adresy na platformie eNauczenie:</td> </tr> </table> | | | Basic literature | Arnold J., Frater M., Pickering M., Digital Television, Wiley, 2007. Brinkman R., The Art and Science of Digital Compositing, Morgan Kaufman, 2008. Chapman N., Chapman J., Digital Multimedia, Wiley, 2009. Davis G., Jones R., Sound Reinforcement Handbook, Hal Leonard, 1989. Halsall F., Multimedia Communications, Addison-Wesley, 2001. Havaladar P., Medioni G., Multimedia Systems, Course Technology, 2010. Holman T., Sound for Digital Video, Focal Press, 2005. James J., Digital Intermediates for Film and Video, Focal Press, 2006. Watkinson J., The Art Digital Video, Focal Press, 2000. | | Supplementary literature | No requirements | | eResources addresses | Adresy na platformie eNauczenie: | |
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| Example issues/ example questions/ tasks being completed | | | | | | | | | | | | |
| Work placement | Not applicable | | | | | | | | | | | |

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