# Study plan

## Name of study plan: Electrical Engineering, Power Engineering and Management - Management of Power Eng. and Electr.

Faculty/Institute/Others: Faculty of Electrical Engineering
Department:
Branch of study guaranteed by the department: Welcome page
Garantor of the study branch:
Program of study: Electrical Engineering, Power Engineering and Management
Type of study: Follow-up master combined
Required credits: 120
Elective courses credits: 0
Sum of credits in the plan: 120
Note on the plan:

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Name of the block: Compulsory courses in the program
Minimal number of credits of the block: 61
The role of the block: P

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Code of the group: 2018_MEEMDIP-K
Name of the group: Diploma Thesis
Requirement credits in the group: In this group you have to gain 25 credits
Requirement courses in the group: In this group you have to complete 1 course
Credits in the group: 25
Note on the group:

| Code | Name of the course / Name of the group of courses *(in case of groups of courses the list of codes of their members)* *Tutors,* ***authors*** *and guarantors (gar.)* | Completion | Credits | Scope | Semester | Role |
|---|---|---|---|---|---|---|
| BDIP25 | **Diploma Thesis** | Z | 25 | 22s | L | P |

**Characteristics of the courses of this group of Study Plan: Code=2018_MEEMDIP-K Name=Diploma Thesis**

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|---|---|---|---|
| BDIP25 | Diploma Thesis | Z | 25 |

Independent final comprehensive work for the Master's degree study programme. A student will choose a topic from a range of topics related to his or her branch of study, which will be specified by branch department or branch departments. The diploma thesis will be defended in front of the board of examiners for the comprehensive final examination.

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Code of the group: 2018_MEEMH-K
Name of the group: Humanities subjects
Requirement credits in the group: In this group you have to gain 5 credits
Requirement courses in the group: In this group you have to complete 1 course
Credits in the group: 5
Note on the group:

| Code | Name of the course / Name of the group of courses *(in case of groups of courses the list of codes of their members)* *Tutors,* ***authors*** *and guarantors (gar.)* | Completion | Credits | Scope | Semester | Role |
|---|---|---|---|---|---|---|
| BD0M16FIL | **Philosophy 2** | Z,ZK | 5 | 14KP+6KS | L | P |
| BD0M16HVT | **History of science and technology 2** | Z,ZK | 5 | 14KP+6KS | L | P |
| BD0M16PSM | **Psychology** *Milana Čížek Hrubá, Jaroslav Knápek* ***Josef Černohous*** *Jiří Vašíček (Gar.)* | Z,ZK | 5 | 14KP+6KS | Z,L | P |
| BD0M16TEO | **Theology** | Z,ZK | 5 | 14KP+6KS | L | P |

**Characteristics of the courses of this group of Study Plan: Code=2018_MEEMH-K Name=Humanities subjects**

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|---|---|---|---|
| BD0M16FIL | Philosophy 2 | Z,ZK | 5 |
| BD0M16HVT | History of science and technology 2 | Z,ZK | 5 |

This subject traces historical developments in electrical engineering branches in the world and in the Czech Lands. Its ultimate goal is to stimulate students' interest in the history and traditions of the subject, while highlighting the developments in technical education and professional organizations, the process of shaping scientific life and the influence of technical engineers

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|---|---|---|---|
| BD0M16PSM | Psychology | Z,ZK | 5 |
| BD0M16TEO | Theology | Z,ZK | 5 |

This subject provides to students the basic orientation in christian theology and requires no special previous education. After short philosophic lecture the basic theologic disciplines are gone through. The subject is determined not only to believer students who want to know the reliable theologic grounding but also above all to ones who want to get know Christianity - religion from which graws our civilization up.

Code of the group: 2018_MEEMP-K
Name of the group: Compulsory subjects of the programme
Requirement credits in the group: In this group you have to gain 31 credits
Requirement courses in the group: In this group you have to complete 6 courses
Credits in the group: 31
Note on the group:

| Code | Name of the course / Name of the group of courses *(in case of groups of courses the list of codes of their members)* *Tutors, **authors** and guarantors (gar.)* | Completion | Credits | Scope | Semester | Role |
|---|---|---|---|---|---|---|
| BD1M16EKE1 | **Economy of Power Industry** *Jiří Vašíček, Oldřich Starý, Tomáš Králík **Tomáš Králík** Oldřich Starý (Gar.)* | Z,ZK | 5 | 14KP+6KC | L | P |
| BD1M15IAP | **Engineering Applications** *Jan Kyncl* | Z,ZK | 5 | 14KP+6KC | Z | P |
| BD1M13JAS1 | **Quality and Reliability** *Pavel Mach, Martin Molhanec **Pavel Mach** Pavel Mach (Gar.)* | Z,ZK | 6 | 14KP+6KC | Z | P |
| BD1MPROJ | **Individual project** *Josef Černohous, Jiří Vašíček, Miroslav Vítek, Zdeněk Müller, Stanislav Bouček **Oldřich Starý** Oldřich Starý (Gar.)* | Z | 5 | 0p+4s | Z | P |
| BD1M15PPE1 | **Elements and Operation of Electrical Power Systems** *Stanislav Bouček, Jan Hlaváček* | Z,ZK | 5 | 14KP+6KS | Z | P |
| BD1M14SSE | **Machinery and Structures of Power Plants** *Petr Kočárník **Petr Kočárník** Petr Kočárník (Gar.)* | Z,ZK | 5 | 14KP+6KC | Z | P |

**Characteristics of the courses of this group of Study Plan: Code=2018_MEEMP-K Name=Compulsory subjects of the programme**

| | | | |
|---|---|---|---|
| BD1M16EKE1 | Economy of Power Industry | Z,ZK | 5 |

Fundamentals of financing of power companies. Cost structure of power generation and distribution. Prices and tariff systems for power, heat and gas production and distribution. Examples of economic evaluation and investment appraisal of the typical project in power sector. Renewable energy sources, externalities. Energy policy and energy law in CR. Liberalization and power market development.

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|---|---|---|---|
| BD1M15IAP | Engineering Applications | Z,ZK | 5 |
| BD1M13JAS1 | Quality and Reliability | Z,ZK | 6 |

Terminology and definitions from the area of quality and reliability and their control, philosophy of quality, systems of quality control in the world. Reliability as a part of quality. Basic definitions from the area of reliability, basic distributions used in reliability and their basic characteristics. Back-up using a warm and cold standby, types of warm and cold standbys. Reliability of components and systems, calculation of reliability using composition and decomposition. and using a method of a list. Basic statistical methods and tools joined with quality control, managerial tools for quality control. Techniques FMEA and QFFD, house of quality. Capability of a process. Taguchi loss function. Audits. Statistical inspection.

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|---|---|---|---|
| BD1MPROJ | Individual project | Z | 5 |

Independent work in the form of a project. A student will choose a topic from a list of topics specified by branch department. The project will be defended within the framework of a subject.

| | | | |
|---|---|---|---|
| BD1M15PPE1 | Elements and Operation of Electrical Power Systems | Z,ZK | 5 |
| BD1M14SSE | Machinery and Structures of Power Plants | Z,ZK | 5 |

The aim of the course is to acquaint students with forms of energy transformation in power plants, describing the function of power facilities, their structure, properties and characteristics.

Name of the block: Povinné předměty zaměření
Minimal number of credits of the block: 44
The role of the block: PZ

Code of the group: 2018_MEEMPPS4-K
Name of the group: Compulsory subjects of the specialization
Requirement credits in the group: In this group you have to gain 44 credits
Requirement courses in the group: In this group you have to complete 9 courses
Credits in the group: 44
Note on the group: Specializace Management energetiky a elektrotechniky

| Code | Name of the course / Name of the group of courses *(in case of groups of courses the list of codes of their members)* *Tutors, **authors** and guarantors (gar.)* | Completion | Credits | Scope | Semester | Role |
|---|---|---|---|---|---|---|
| BD1M16EKL | **Ecology and economy** ***Jaroslav Knápek*** | Z,ZK | 5 | 21KP+3KS | Z | PZ |
| BD1M16EKM | **Econometrics and economic applications** *Šerzod Tašpulatov, Lubomír Lízal **Lubomír Lízal** Lubomír Lízal (Gar.)* | Z,ZK | 4 | 14KP+6KS | L | PZ |

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|---|---|---|---|---|---|---|
| BD1M16EVE | **Economics of Power Generation** | Z,ZK | 5 | 14KP+6KS | L | PZ |
| BD1M16FIM1 | **Financial Management**<br>***Oldřich Starý*** | Z,ZK | 5 | 14KP+6KS | L | PZ |
| BD1M16FIU | **Financial accounting**<br>***Jiří Vašíček*** | Z,ZK | 5 | 14KP+6KS | Z | PZ |
| BD1M16MES | **Management and Economics of Power Systems**<br>*Oldřich Starý, Tomáš Králík* ***Tomáš Králík*** *Oldřich Starý (Gar.)* | Z,ZK | 5 | 14KP+6KS | Z | PZ |
| BD1M16MNR | **Managerial Decision Making**<br>***Jaroslav Knápek*** | Z,ZK | 5 | 14KP+6KS | Z | PZ |
| BD1M16MAR | **Marketing** | Z,ZK | 5 | 14KP+6KS | L | PZ |
| BD1M16OVY | **Operations Research**<br>***Jaroslav Knápek*** | Z,ZK | 5 | 14KP+6KS | L | PZ |

**Characteristics of the courses of this group of Study Plan: Code=2018_MEEMPPS4-K Name=Compulsory subjects of the specialization**

| | | | |
|---|---|---|---|
| BD1M16EKL | Ecology and economy | Z,ZK | 5 |
| Development of environmental protection. Sustainable development. Global environmental problems and their aspects. Greenhouse effect and climate changes. Fossil fuels, nuclear fuel cycle and environmental impacts. Support schemes for renewable energy sources utilization. Economic effectiveness of renewable energy sources projects. Regulatory and economic instruments for economic activities regulation. Externalities. Environmental indicators. | | | |
| BD1M16EKM | Econometrics and economic applications | Z,ZK | 4 |
| History of Econometrics, econometric models, input-output models, modelling of demand, time series models, production functions, linear regression models, simultaneous equations models, econometric analysis of economic situation | | | |
| BD1M16EVE | Economics of Power Generation | Z,ZK | 5 |
| Power sources overview, energy processes analysis. | | | |
| BD1M16FIM1 | Financial Management | Z,ZK | 5 |
| Principles of finance, present value and alternative cost of capital, net present value, valuation of bonds and stocks, investment decision and net present value, risk and alternative cost of capital, risk and return, lease or buy, taxes, inflation and return, financial and real options, option valuation and application, hedging, short term finance, cash flow management. | | | |
| BD1M16FIU | Financial accounting | Z,ZK | 5 |
| Principles of accounting. Assets, inventory and financial investment book keeping. Debt and equity capital. Cost, revenues and profit. Tax system and accounting. Balance sheet, profit and loss account. Cash flow statement. Analysis of company's financial position. International accounting standards. Auditing, consolidated statements. Hello. | | | |
| BD1M16MES | Management and Economics of Power Systems | Z,ZK | 5 |
| This course will give an overview of the various aspects of power supply with special emphasis on power management. The course characterises energy costs and marginal costs for determination of prices and tariffs. Energy market principles and operational decision making are integral parts of the course as well. | | | |
| BD1M16MNR | Managerial Decision Making | Z,ZK | 5 |
| System approach and decision making, Decision models, Games theory, Decision making under uncertainty and risk, Decisions with multiple objectives, Stochastic programming, Expert systems, Cluster analysis | | | |
| BD1M16MAR | Marketing | Z,ZK | 5 |
| The role and functions of the marketing management. Marketing research and marketing information system. Concepts of marketing strategy. The use of product life cycle and portfolio. Marketing-mix. Product and service policy, pricing and contractation policy, communication, distribution. Controlling and audit. | | | |
| BD1M16OVY | Operations Research | Z,ZK | 5 |
| Art of modeling and elements of decision models, Linear programming, Transportation problem, Integer linear programming, Introduction to graphs theory, Nonlinear programming, Dynamic programming, Monte Carlo simulation, Project management (CPM, PERT). | | | |

Name of the block: Compulsory elective courses
Minimal number of credits of the block: 15
The role of the block: PV

Code of the group: 2018_MEEMPV2-K
Name of the group: Compulsory elective subjects of the specialization
Requirement credits in the group: In this group you have to gain at least 15 credits (at most 45)
Requirement courses in the group: In this group you have to complete at least 3 courses ( at most 9)
Credits in the group: 15
Note on the group:

| **Code** | **Name of the course / Name of the group of courses** ***(in case of groups of courses the list of codes of their members)*** *Tutors,* ***authors*** *and guarantors (gar.)* | **Completion** | **Credits** | **Scope** | **Semester** | **Role** |
|---|---|---|---|---|---|---|
| BD1M16CTR1 | **Controlling** | Z,ZK | 5 | 14KP+6KS | Z | PV |
| BD1M16DES | **Power Transport Systems**<br>***Miroslav Vítek*** | Z,ZK | 5 | 14KP+6KS | Z | PV |
| BD1M16EUE1 | **Economy of Energy Use**<br>*Jiří Beranovský* ***Jiří Beranovský*** *Jiří Beranovský (Gar.)* | Z,ZK | 5 | 14KP+6KS | L | PV |
| BD1M15ETT | **Electrical Heat**<br>*Jan Kyncl* | Z,ZK | 5 | 14KP+6KS | Z | PV |
| BD1M16ENI | **Environmental Engineering** | Z,ZK | 5 | 14KP+6KS | Z,L | PV |
| BD1M16RES | **Development of Energy Systems** | Z,ZK | 5 | 14KP+6KS | L | PV |
| BD1M16JAK | **Quality management** | Z,ZK | 5 | 14KP+6KS | Z | PV |

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|---|---|---|---|---|---|---|
| BD1M16STA | **Statistical methods in economics**<br>***Šerzod Tašpulatov*** | Z,ZK | 5 | 14KP+6KC | L | PV |

**Characteristics of the courses of this group of Study Plan: Code=2018_MEEMPV2-K Name=Compulsory elective subjects of the specialization**

| | | | |
|---|---|---|---|
| BD1M16CTR1 | Controlling | Z,ZK | 5 |
| The aim of the course is to present Management Control as a modern approach to Management of Enterprise, based on the Process and Activity Based Management which supports innovative changes by the application of Project Management principles. The focus is on the integrative potential of Management Control in the Management of Enterprise and on the key role played by Project Management. Special attention is paid to technical-financial integration and its impact. The emphasis is on Project Management of innovation processes, which guarantee the company not merely to survive, but also to achieve high performance. The computerized models are used for presentation key principles, procedures and also key links between the controlled entities and used managerial tools. | | | |
| BD1M16DES | Power Transport Systems | Z,ZK | 5 |
| The course is focused on economical aspects of design and operation of various technical systems for various energy forms. That is road, railway and ship transport of solid and liquid fuel, district heating system, cable car and convenyor belt transport for solid fuel and mainly grid for electricity (power) transport. | | | |
| BD1M16EUE1 | Economy of Energy Use | Z,ZK | 5 |
| Organization and energy management of company, buildings or energy systems. Energy need and consumption, energy balance. Energy characterization of aggregate, secondary energy sources. Energy audit and feasibility study, optimization of energy management of energy systems. Prices and tariffs, economy and financial analysis. | | | |
| BD1M15ETT | Electrical Heat | Z,ZK | 5 |
| BD1M16ENI | Environmental Engineering | Z,ZK | 5 |
| The course focuses on describing the interdisciplinary relationships of living and non-living nature with electrical engineering. By integrating electrical engineering into classical environmental practices, new methods and techniques are being developed that either focus on predictive environmental protection from industrial influences or address their consequences. The course discusses both routinely used technologies as well as prototype and laboratory technologies, mostly applicable to insitu remediation. Inspiration from self-renewing natural processes provides the ideal motivation and platform for developing and testing new innovative methods. The course is complemented by laboratory work carried out at CTU, UCT, IMCH and selected excursions. Laboratory facilities have been created for the course at the FEE CTU in Prague. | | | |
| BD1M16RES | Development of Energy Systems | Z,ZK | 5 |
| In this subject the basic questions of power stations design is solved. This design is discussed from viewpoint of ecology and level of used technology. Special focus is on future importance of classical and renewable energy resources. These kinds of energy resources are considered as the most important factor of future development of appropriate power industry systems. The subject provides overview of practical application of modern technologies to guarantee the development of energetic systems. | | | |
| BD1M16JAK | Quality management | Z,ZK | 5 |
| History of quality management (QM), Current approaches to quality management, quality management system (QMS) based on ISO 9001, Process management, Quality planning, Metrology in QM, Control of documents and records, Internal audits of QMS, Continual improvement of QMS, Integrated management, Statistic methods in QM, Accreditation and certification | | | |
| BD1M16STA | Statistical methods in economics | Z,ZK | 5 |
| Basic Concepts. Statistical series. Assortment. Distributions of frequencies. One-dimensional descriptive characteristics. Measures of variables, coefficient of skewness, coefficient of excess. Points estimates of basic characteristics. Interval estimates of basic characteristics. Hypothesis testing of basic characteristics. Individual indexs number. Aggregative indexs. Variable-structure indexs. Multifactor indexs . Correlation and regression, Basic Concepts. Measurement of dependence intensity. Time series, concepts, qualities. Chronological average . Time series - trends and extrapolation. | | | |

Name of the block: Elective courses
Minimal number of credits of the block: 0
The role of the block: V

Code of the group: MTV
Name of the group: Physical education
Requirement credits in the group:
Requirement courses in the group:
Credits in the group: 0
Note on the group:

| **Code** | **Name of the course / Name of the group of courses**<br>***(in case of groups of courses the list of codes of their members)***<br>*Tutors,* ***authors*** *and guarantors (gar.)* | **Completion** | **Credits** | **Scope** | **Semester** | **Role** |
|---|---|---|---|---|---|---|
| TVV | **Physical education** | Z | 0 | 0+2 | Z,L | V |
| A003TV | **Physical Education**<br>***Jiří Drnek*** | Z | 2 | 0+2 | L,Z | V |
| TV-V1 | **Physical education** | Z | 1 | 0+2 | Z,L | V |
| TVV0 | **Physical education** | Z | 0 | 0+2 | Z,L | V |
| TVKLV | **Physical Education Course** | Z | 0 | 7dní | L | V |
| TVKZV | **Physical Education Course** | Z | 0 | 7dní | Z | V |

**Characteristics of the courses of this group of Study Plan: Code=MTV Name=Physical education**

| | | | |
|---|---|---|---|
| TVV | Physical education | Z | 0 |
| A003TV | Physical Education | Z | 2 |
| TV-V1 | Physical education | Z | 1 |
| TVV0 | Physical education | Z | 0 |
| TVKLV | Physical Education Course | Z | 0 |
| TVKZV | Physical Education Course | Z | 0 |

Code of the group: 2018_MEEMVOL-K
Name of the group: Elective subjects
Requirement credits in the group:
Requirement courses in the group:
Credits in the group: 0
Note on the group: ~Nabídku volitelných předmětů uspořádaných podle kateder najdete na webových stránkách http://www.fel.cvut.cz/cz/education/volitelne-predmety.html\\

## List of courses of this pass:

| Code | Name of the course | Completion | Credits |
|---|---|---|---|
| A003TV | Physical Education | Z | 2 |
| BD0M16FIL | Philosophy 2 | Z,ZK | 5 |
| BD0M16HVT | History of science and technology 2 | Z,ZK | 5 |
| This subject traces historical developments in electrical engineering branches in the world and in the Czech Lands. Its ultimate goal is to stimulate students' interest in the history and traditions of the subject, while highlighting the developments in technical education and professional organizations, the process of shaping scientific life and the influence of technical engineers | | | |
| BD0M16PSM | Psychology | Z,ZK | 5 |
| BD0M16TEO | Theology | Z,ZK | 5 |
| This subject provides to students the basic orientation in christian theology and requires no special previous education. After short philosophic lecture the basic theologic disciplines are gone through. The subject is determined not only to believer students who want to know the reliable theologic grounding but also above all to ones who want to get know Christianity - religion from which graws our civilization up. | | | |
| BD1M13JAS1 | Quality and Reliability | Z,ZK | 6 |
| Terminology and definitions from the area of quality and reliability and their control, philosophy of quality, systems of quality control in the world. Reliability as a part of quality. Basic definitions from the area of reliability, basic distributions used in reliability and their basic characteristics. Back-up using a warm and cold standby, types of warm and cold standbys. Reliability of components and systems, calculation of reliability using composition and decomposition. and using a method of a list. Basic statistical methods and tools joined with quality control, managerial tools for quality control. Techniques FMEA and QFFD, house of quality. Capability of a process. Taguchi loss function. Audits. Statistical inspection. | | | |
| BD1M14SSE | Machinery and Structures of Power Plants | Z,ZK | 5 |
| The aim of the course is to acquaint students with forms of energy transformation in power plants, describing the function of power facilities, their structure, properties and characteristics. | | | |
| BD1M15ETT | Electrical Heat | Z,ZK | 5 |
| BD1M15IAP | Engineering Applications | Z,ZK | 5 |
| BD1M15PPE1 | Elements and Operation of Electrical Power Systems | Z,ZK | 5 |
| BD1M16CTR1 | Controlling | Z,ZK | 5 |
| The aim of the course is to present Management Control as a modern approach to Management of Enterprise, based on the Process and Activity Based Management which supports innovative changes by the application of Project Management principles. The focus is on the integrative potential of Management Control in the Management of Enterprise and on the key role played by Project Management. Special attention is paid to technical-financial integration and its impact. The emphasis is on Project Management of innovation processes, which guarantee the company not merely to survive, but also to achieve high performance. The computerized models are used for presentation key principles, procedures and also key links between the controlled entities and used managerial tools. | | | |
| BD1M16DES | Power Transport Systems | Z,ZK | 5 |
| The course is focused on economical aspects of design and operation of various technical systems for various energy forms. That is road, railway and ship transport of solid and liquid fuel, district heating system, cable car and convenyor belt transport for solid fuel and mainly grid for electricity (power) transport. | | | |
| BD1M16EKE1 | Economy of Power Industry | Z,ZK | 5 |
| Fundamentals of financing of power companies. Cost structure of power generation and distribution. Prices and tariff systems for power, heat and gas production and distribution. Examples of economic evaluation and investment appraisal of the typical project in power sector. Renewable energy sources, externalities. Energy policy and energy law in CR. Liberalization and power market development. | | | |
| BD1M16EKL | Ecology and economy | Z,ZK | 5 |
| Development of environmental protection. Sustainable development. Global environmental problems and their aspects. Greenhouse effect and climate changes. Fossil fuels, nuclear fuel cycle and environmental impacts. Support schemes for renewable energy sources utilization. Economic effectiveness of renewable energy sources projects. Regulatory and economic instruments for economic activities regulation. Externalities. Environmental indicators. | | | |
| BD1M16EKM | Econometrics and economic applications | Z,ZK | 4 |
| History of Econometrics, econometric models, input-output models, modelling of demand, time series models, production functions, linear regression models, simultaneous equations models, econometric analysis of economic situation | | | |
| BD1M16ENI | Environmental Engineering | Z,ZK | 5 |
| The course focuses on describing the interdisciplinary relationships of living and non-living nature with electrical engineering. By integrating electrical engineering into classical environmental practices, new methods and techniques are being developed that either focus on predictive environmental protection from industrial influences or address their consequences. The course discusses both routinely used technologies as well as prototype and laboratory technologies, mostly applicable to insitu remediation. Inspiration from self-renewing natural processes provides the ideal motivation and platform for developing and testing new innovative methods. The course is complemented by laboratory work carried out at CTU, UCT, IMCH and selected excursions. Laboratory facilities have been created for the course at the FEE CTU in Prague. | | | |
| BD1M16EUE1 | Economy of Energy Use | Z,ZK | 5 |
| Organization and energy management of company, buildings or energy systems. Energy need and consumption, energy balance. Energy characterization of aggregate, secondary energy sources. Energy audit and feasibility study, optimization of energy management of energy systems. Prices and tariffs, economy and financial analysis. | | | |

| | | | |
|---|---|---|---|
| BD1M16EVE | Economics of Power Generation | Z,ZK | 5 |
| | Power sources overview, energy processes analysis. | | |
| BD1M16FIM1 | Financial Management | Z,ZK | 5 |
| | Principles of finance, present value and alternative cost of capital, net present value, valuation of bonds and stocks, investment decision and net present value, risk and alternative cost of capital, risk and return, lease or buy, taxes, inflation and return, financial and real options, option valuation and application, hedging, short term finance, cash flow management. | | |
| BD1M16FIU | Financial accounting | Z,ZK | 5 |
| | Principles of accounting. Assets, inventory and financial investment book keeping. Debt and equity capital. Cost, revenues and profit. Tax system and accounting. Balance sheet, profit and loss account. Cash flow statement. Analysis of company's financial position. International accounting standards. Auditing, consolidated statements. Hello. | | |
| BD1M16JAK | Quality management | Z,ZK | 5 |
| | History of quality management (QM), Current approaches to quality management, quality management system (QMS) based on ISO 9001, Process management, Quality planning, Metrology in QM, Control of documents and records, Internal audits of QMS, Continual improvement of QMS, Integrated management, Statistic methods in QM, Accreditation and certification | | |
| BD1M16MAR | Marketing | Z,ZK | 5 |
| | The role and functions of the marketing management. Marketing research and marketing information system. Concepts of marketing strategy. The use of product life cycle and portfolio. Marketing-mix. Product and service policy, pricing and contractation policy, communication, distribution. Controlling and audit. | | |
| BD1M16MES | Management and Economics of Power Systems | Z,ZK | 5 |
| | This course will give an overview of the various aspects of power supply with special emphasis on power management. The course characterises energy costs and marginal costs for determination of prices and tariffs. Energy market principles and operational decision making are integral parts of the course as well. | | |
| BD1M16MNR | Managerial Decision Making | Z,ZK | 5 |
| | System approach and decision making, Decision models, Games theory, Decision making under uncertainty and risk, Decisions with multiple objectives, Stochastic programming, Expert systems, Cluster analysis | | |
| BD1M16OVY | Operations Research | Z,ZK | 5 |
| | Art of modeling and elements of decision models, Linear programming, Transportation problem, Integer linear programming, Introduction to graphs theory, Nonlinear programming, Dynamic programming, Monte Carlo simulation, Project management (CPM, PERT). | | |
| BD1M16RES | Development of Energy Systems | Z,ZK | 5 |
| | In this subject the basic questions of power stations design is solved. This design is discussed from viewpoint of ecology and level of used technology. Special focus is on future importance of classical and renewable energy resources. These kinds of energy resources are considered as the most important factor of future development of appropriate power industry systems. The subject provides overview of practical application of modern technologies to guarantee the development of energetic systems. | | |
| BD1M16STA | Statistical methods in economics | Z,ZK | 5 |
| | Basic Concepts. Statistical series. Assortment. Distributions of frequencies. One-dimensional descriptive characteristics. Measures of variables, coefficient of skewness, coefficient of excess. Points estimates of basic characteristics. Interval estimates of basic characteristics. Hypothesis testing of basic characteristics. Individual indexs number. Aggregative indexs. Variable-structure indexs. Multifactor indexs . Correlation and regression, Basic Concepts. Measurement of dependence intensity. Time series, concepts, qualities. Chronological average . Time series - trends and extrapolation. | | |
| BD1MPROJ | Individual project | Z | 5 |
| | Independent work in the form of a project. A student will choose a topic from a list of topics specified by branch department. The project will be defended within the framework of a subject. | | |
| BDIP25 | Diploma Thesis | Z | 25 |
| | Independent final comprehensive work for the Master's degree study programme. A student will choose a topic from a range of topics related to his or her branch of study, which will be specified by branch department or branch departments. The diploma thesis will be defended in front of the board of examiners for the comprehensive final examination. | | |
| TV-V1 | Physical education | Z | 1 |
| TVKLV | Physical Education Course | Z | 0 |
| TVKZV | Physical Education Course | Z | 0 |
| TVV | Physical education | Z | 0 |
| TVV0 | Physical education | Z | 0 |

For updated information see http://bilakniha.cvut.cz/en/f3.html
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