

# COURSES – FALL 2021

## Semester structure

We run two simultaneous term systems: 12+3 weeks and 15 week. The semester structure you follow will depend on subject and level of courses.

**15 week system:** Students taking MSc/Masters Business courses, ML Law courses will follow the 15 week system

**12+3-week system:** Students taking BSc Business, Computer Science, Engineering, Sports Science, Psychology courses. The term is divided into two periods of 12 and 3 weeks. Students take regular courses during the 12-week period (usually 4-5 courses) and one intensive course during the 3-week period. Not all departments offer courses in English in the 3-week period. It is only possible to take one 3-week course. **It is only possible to take one 3-week courses**

## What can I study? (options & restrictions)

- Courses can be selected from all departments, but please note prerequisites
- Exchange students cannot take courses offered by MBA, Clinical psychology and Iceland School of Energy (except ISE partners,)
- Freemover students can select courses from Iceland School of Energy
- It is only possible to take one three-week course.
- Students are not accepted for thesis work, unless pre-arranged with a Professor.
- Students nominated to Iceland School of Energy – should contact Randall Morgan Greene [rmorgang@ru.is](mailto:rmorgang@ru.is) to discuss study plan.

## Department specific information

### Department of Business

Maximum of 36 ECTS  
BSc students cannot take MSc courses (unless completed 180 ECTS)  
BSc semester structure: 12+3 week  
MSc courses mostly taught over the weekends (Thursday/Friday /Saturday).  
MSc semester structure: 15 week

### Department of Engineering

BSc students can take some MSc courses.  
Semester structure: 12+3 weeks

### Department of Sports Science

Courses only for Sports Science students  
Only offered at BSc level.  
Opportunities to arrange research projects.  
Semester structure: 12+3 weeks

### Iceland School of Energy

Courses only available for exchange students from Universities with a special agreement with Iceland School of Energy and freemover students.  
Semester structure: 12+3 weeks

### Department of Computer Science

MSc students can choose courses from BSc or MSc routes.  
Some MSc courses are open to BSc students.  
Semester structure: 12 +3 weeks

### Department of Law

Only courses at Masters level  
3rd year BSc in Law students can take MSc courses  
Semester structure: 15 weeks

### Department of Psychology

Courses only offered Fall semester for exchange.  
Courses are only available at BSc level.  
Semester structure: 12+3 weeks

# Business Administration

| BSc          | All BSc courses 6 ECTS                                  | Pre requisites                                    |
|--------------|---|---|
| E-216-FESA   | <b>Social Psychology</b> *3 week                        | None – open to all students                       |
| V-511-STST   | <b>Human Resource Management</b> *3 week                | Management  |
| V-528-MAVI   | <b>Marketing &amp; Business Research Methods</b>        | Methodology, applied statistics                   |
| V-406-TOL2   | <b>Applied Statistics II</b>                            | Applied statistics I                              |
| V-308-ALVI   | <b>International Business</b> *3 week                   | Macroeconomics, marketing management              |
| V-107-FJAR   | <b>Corporate finance</b>                                | Applied mathematics, applied statistics           |
| V-522-SERV   | <b>Service Management</b>                               | Marketing management, management                  |
| V-644-BRAN   | <b>Branding</b>   | Marketing management, Consumer Behaviour          |
| V-552-STAF   | <b>Digital Marketing</b>                                | Marketing management                              |
| V-523-MACO   | <b>Consumer Behaviour &amp; Marketing Communication</b> | Marketing management                              |
| V-517 – VIRD | <b>Valuation</b>  | Applied Mathematics I, Corporate Finance          |
| V-210-ECON   | <b>Econometrics I</b>                                   | Macro & Micro Econ. Applied Math I, Applied Stats |
| V-231-ECOM   | <b>Econometric II</b>                                   | Econometrics I                                    |

| MSc        |  |  |
|------------|--|--|
| V-738-ADDM | <b>Advanced and Digital Marketing</b>  |  |
| V-785-ATET | <b>Advanced Topics in Emerging Technologies</b> 7.5 ECTS                             |  |
| V-736-CMLE | <b>Change Management &amp; leadership</b> 7.5 ECTS                                   |  |
| V-755-CORP | <b>Corporate Finance</b> 7.5 ECTS  |  |
| V-702-CREM | <b>Creative Approaches &amp; Entrepreneurial Mind-sets</b> 7.5 ECTS                  |  |
| V-736-ENAR | <b>Enterprise Architectures</b> 7.5 ECTS   |  |
| V-853-EQUI | <b>Equity Analysis</b> 7.5 ECTS  |  |
| V-704-FTHM | <b>Fundamentals in Tourism &amp; Hospitality Management</b> 7.5 ECTS                 | Prerequisites: BSc degree or at least 180 ECTS in Business Administration, Economics or related subjects |
| V-703-INEN | <b>Innovation &amp; Entrepreneurship: Field of knowledge &amp; Practice</b> 7.5 ECTS |  |
| V-757-INTF | <b>International Finance</b> 7.5 ECTS  |  |
| V-736-INMA | <b>International Marketing</b> 7.5 ECTS  |  |
| V-715-ORPS | <b>Organizational Psychology</b> 7.5 ECTS  |  |
| V-830-PEMA | <b>Performance Management</b> 3.75 ECTS  |  |
| V-852-PORT | <b>Portfolio Management</b> 7.5 ECTS   |  |
| V-730-STRT | <b>Staffing: from Recruitment to Termination</b> 7.5 ECTS                            |  |
| V-712-STJO | <b>Strategic Management</b> 7.5 ECTS   |  |

# Computer Science

| BSc        | All BSc courses 6 ECTS                        | Pre-requisites                      |
|------------|---|-------------------------------------|
| T-303-HUGB | <b>Software Engineering</b>                   | Software analysis and design        |
| T-504-ITML | <b>Introduction to Machine Learning</b>       | Programming, Algorithms             |
| T-511-TGRA | <b>Computer Graphics Algorithms</b>           | Algorithms                          |
| T-519-STOR | <b>Theory of Computation</b>                  | Algorithms, Discrete math           |
| T-409-TSAM | <b>Computer Networks</b>                      | Programming, Data structures        |
| T-535-CPSY | <b>Cyber Physical Systems</b>                 | Operating systems                   |
| T-513-CRNU | <b>Cryptography and Number Theory</b>         | Calculus, Discrete math             |
| E-402-STFO | <b>Mathematical Programming</b> 3-week course | Algorithms, Discrete math, Calculus |
| T-603-THYD | <b>Compilers</b>                              | Programming languages               |

| MSc        | All MSc courses 8 ECTS                 |                                |
|------------|--|--------------------------------|
| T-740-SPMM | <b>Software Project Management</b>     | Programming,                   |
| T-538-MALV | <b>Natural Language Processing</b>     | Programming, only MSc students |
| T-809-DATA | <b>Datamining and Machine Learning</b> | Programming, only MSc students |
| T-723-VIEN | <b>Virtual Environments</b>            | Programming, algorithms        |

# Psychology

| BSc         | All BSc courses 6 ECTS                 | Pre-requisites                  |
|-------------|--|---------------------------------|
| E-216 FESA  | <b>Social Psychology</b> 3 week course | No pre-requisites – open to all |
| E-501 ATGR  | <b>Applied Behaviour Analysis</b>      |                                 |
| E-503- HEIL | <b>Health Psychology</b>               | Psychology students only        |
| E-602-JASA  | <b>Positive Psychology</b> 3 week      |                                 |

# Engineering

| BSc        | All BSc courses 6 ECTS  | Pre-requisites   |
|------------|---|--|
| T-306-RAS1 | <b>Analog Circuit Analysis</b>  | Math and physics   |
| T-316-LABB | <b>Measurement Systems</b> <small>3-week course</small>               | Structural Engineering, Classical Dynamics   |
| T-411-MECH | <b>Mechatronics I</b>   | Programming, Statics & Mechanics of Materials, Electronics   |
| T-501-REGL | <b>Feedback Control Systems</b>                                       | Calculus I, Calculus II, Mathematics III, Linear Algebra, Linear Dynamic Systems. Programming in Matlab. |
| T-561-LIFF | <b>Biomechanics</b> <small>3-week course</small>                      | Statics and Mechanics of Materials, Physics  |
| T-621-CLIN | <b>Clinical Engineering</b>   | Biomedical Engineering   |
| MSc        |   |  |
| T-801-RESM | <b>Research Methods</b> <small>4 ECTS</small>                         | Open to all MSc students – CS & Eng.   |
| T-806-INDE | <b>Independent project</b> <small>6 ECTS</small>                      | BSc degree in Engineering  |
| T-806-SIMU | <b>Simulation II</b> <small>3-week course, 6 ECTS</small>             | Programming, open to all MSc students  |
| T-807-QUAL | <b>Quality Management</b> <small>* 3 week</small>                     | Open to some BSc students  |
| T-810-OPTI | <b>Optimization Methods</b> <small>6 ECTS</small>                     | BSc degree in Engineering  |
| T-811-PROB | <b>Applied Probability</b> <small>8 ECTS</small>                      | Probability, BSc in Engineering  |
| T-828-BIOM | <b>Advanced Biomechanics II</b> <small>8 ECTS</small>                 | MSc Engineering students only  |
| T-829-GRO1 | <b>Graduate Research Opportunities I</b> <small>6 ECTS</small>        | BSc degree in Engineering  |
| T-829-GRO2 | <b>Graduate Research Opportunities II</b> <small>6 ECTS</small>       | BSc degree in Engineering  |
| T-860-IMAG | <b>Neuro-science and Technology</b> <small>6 ECTS</small>             | BSc Biomedical Engineering   |
| T-860-NEUR | <b>Medical Imaging and Modelling</b> <small>6 ECTS</small>            | BSc Biomedical Engineering   |
| T-863-EIIP | <b>Energy in Industrial Processes</b> <small>8 ECTS</small>           | Thermodynamics   |
| T-865-MADE | <b>Precision Machine Design</b> <small>8 ECTS</small>                 | BSc degree in Engineering  |
| T-866-POEL | <b>Power Electronics II</b> <small>6 ECTS</small>                     | Undergraduate degree in Electrical Engineering   |
| T-867-POSY | <b>Power Systems Management</b>                                       | BSc in Electrical Engineering or similar   |
| T-869-COMP | <b>Computer Vision Applications</b> <small>6 ECTS * 3 week</small>    | BSc Biomedical Engineering   |
| T-809-DATA | <b>Datamining and machine learning</b> <small>8 ECTS</small>          | Programming, BSc in Engineering  |
| T-808-NOLI | <b>Applying Models in Management</b> <small>8 ECTS</small>            | BSc degree in Engineering  |
| T-815-FIXE | <b>Fixed Income and Interest Rate Modelling</b> <small>8 ECTS</small> | BSc degree in Engineering  |
| T-814-FINA | <b>Introduction to Corporate Finance</b> <small>6 ECTS</small>        | BSc degree in Engineering  |

# Iceland School of Energy (ISE)

Courses marked in **red**, are only available to students coming from universities with a special agreement with Iceland School of Energy (ISE).

| MSc        |  | Pre-requisites and course description   |
|------------|--|---|
| T-809-DATA | <b>Data Mining &amp; Machine Learning</b> <small>8 ECTS</small>              | Programming, BSc in Engineering   |
| SE-802-ET1 | <b>Energy Technology*</b> <small>6 ECTS</small>                              | Introduction to Energy Engineering for Non-Engineers – MSc students only - <small>ISE only</small>                    |
| SE-803-GE1 | <b>Energy Geology*</b> <small>3 ECTS</small>                                 | Introduction to Geology for energy applications for non-geologists – MSc students only - <small>ISE only</small>      |
| SE-817-STE | <b>Special Topics in Engineering*</b>  | Rotating subject, subject in geological modelling in Fall 20, energy storage module Fall 19 - <small>ISE only</small> |
| SE-805-EC1 | <b>Energy Economics*</b> <small>6 ECTS</small>                               | Introduction to Energy Economics. BSc/BA courses in macro/micro economics – <small>ISE only</small>                   |
| SE-818-STE | <b>Special Topics in Energy*</b> <small>3 ECTS, 3 week course</small>        | Rotating subject, case study course in energy economics for Fall 21 - <small>ISE only</small>                         |
| SE-806-EI1 | <b>Environmental Impact Assessment*</b> <small>6 ECTS, 3 week course</small> | None – MSc students only <small>ISE only</small>  |
| T-866-POEL | <b>Power Electronics II</b>  | Undergraduate degree in Electrical Engineering  |
| T-867-POSY | <b>Power Systems Operation</b> <small>8 ECTS</small>                         | Undergraduate degree in Electrical Engineering  |
| T-863-EIIP | <b>Energy in Industrial Processes</b> <small>8 ECTS</small>                  | Thermodynamics  |
| L-712-IEEL | <b>International &amp; European Energy Law</b> <small>7,5 ECTS</small>       | BSc in relevant subject   |

Students nominated to Iceland School of Energy – should contact Randall Morgan Greene [rmorgang@ru.is](mailto:rmorgang@ru.is) to discuss a study plan.

# Law

MSc

Pre-requisites

|             |  |
|-------------|--|
| L-714 -MAEV | <b>European Convention on Human Rights</b> 7,5 ECTS                        |
| L-712-IEEL  | <b>International and European Energy Law Icelandic Energy Law</b> 7,5 ECTS |
| L-754-ISIN  | <b>International Standards of Investment Protection</b> 7,5 ECTS           |
| L-747-EUMF  | <b>European Law: Internal Market</b> 7,5 ECTS                              |
| L-719-EEAL  | <b>EEA Moot Court Competition</b> 7,5 ECTS                                 |
| TBC         | <b>Law and Economics</b> 7,5 ECTS  |
| L-734-IARB  | <b>International Law of Arbitration</b> 3,75 ECTS                          |
| L-755 -DISP | <b>Dispute Resolution</b> 3,75 ECTS  |
| L-733-WCAM  | <b>Willem C. Vis Int. Commercial Arbitration Moot I</b> 3,75 ECTS          |

# Sports Science

BSc

All BSc courses 6 ECTS

Pre-requisites

|             |  |
|-------------|--|
| E-114-HAKN  | <b>Team Handball/Football</b>                              |
| E-416-BAVO  | <b>Basketball/ Volleyball</b>                              |
| E-609-EIHE  | <b>Personal Training and Health Coaching</b> 3 week course |
| E-525-OUTR  | <b>Outdoor Recreation</b>                                  |
| E-513- RANN | <b>Research</b>  |

Only open to Sports Science Students.