

## Mechanical Engineering

Faculty of Mechanical Engineering

### Lectures held in English

Last update: 26.03.2018

| Title in English  | Title in German  | Institute of  | Lecturer / Professor  | Contact Person               | E-Mail   | Credits | Semester | Level    | Study programme / specialization   | Module number | Comments   |
|---|--|---|---|------------------------------|--|---------|----------|----------|--|---------------|--|
| <a href="#">Computational Biomechanics</a>                                    | Numerische Biomechanik   | <a href="#">Festkörpermechanik</a>  | Prof. Dr.-Ing. Markus Böhl  | Prof. Dr.-Ing. Markus Böhl   | <a href="mailto:m.boehl@tu-braunschweig.de">m.boehl@tu-braunschweig.de</a>             |         | summer   | Bachelor | Mechanical Engineering, Industrial Engineering   | MB-IFM-25     |  |
| <a href="#">Computational Acoustics</a>                                       | Numerische Akustik   | <a href="#">Konstruktionstechnik</a>  | Prof. Dr. Sabine C. Langer  | Prof. Dr. Sabine C. Langer   | <a href="mailto:s.langer@tu-braunschweig.de">s.langer@tu-braunschweig.de</a>           |         | summer   | Master   | Mechanical Engineering, Computational Sciences in Engineering  | MB-IK-24      |  |
| <a href="#">Computational Acoustics with Laboratory</a>                       | Numerische Akustik mit Labor   | <a href="#">Konstruktionstechnik</a>  | Prof. Dr. Sabine C. Langer  | Prof. Dr. Sabine C. Langer   | <a href="mailto:s.langer@tu-braunschweig.de">s.langer@tu-braunschweig.de</a>           |         | summer   | Master   | Mechanical Engineering, Computational Sciences in Engineering  | MB-IK-36      |  |
| <a href="#">Computer Aided Process Engineering I - Introduction</a>           | Computergestützte Verfahrensbearbeitung I - Einführung                         | <a href="#">Chemische und Thermische Verfahrenstechnik</a>                                      | Prof. Dr.-Ing. S. Scholl  | Prof. Dr.-Ing. S. Scholl     | <a href="mailto:s.scholl@tu-braunschweig.de">s.scholl@tu-braunschweig.de</a>           |         | summer   | Master   | Biochemical and Chemical Engineering, Mechanical Engineering, Industrial Engineering, Biotechnology  | MB-ICTV-26    |  |
| <a href="#">Energy Efficiency in Production Engineering</a>                   | Energieeffizienz in der Produktionstechnik                                     | <a href="#">Werkzeugmaschinen und Fertigungstechnik</a>   | Prof. Dr.-Ing. C. Herrmann, Dr.-Ing. S.Thiede                                     | Lennart Büth                 | <a href="mailto:l.bueht@tu-braunschweig.de">l.bueht@tu-braunschweig.de</a>             |         | summer   | Master   | Mechanical Engineering, Industrial Engineering   | MB-IWF-52     |  |
| <a href="#">Energy Efficiency in Production Engineering with Laboratory</a>   | Energieeffizienz in der Produktionstechnik mit Labor                           | <a href="#">Werkzeugmaschinen und Fertigungstechnik</a>   | Prof. Dr.-Ing. C. Herrmann, Dr.-Ing. S.Thiede                                     | Bastian Thiede               | <a href="mailto:b.thiede@tu-braunschweig.de">b.thiede@tu-braunschweig.de</a>           |         | summer   | Master   | Mechanical Engineering, Industrial Engineering   | MB-IWF-49     |  |
| <a href="#">Energy Technology Basics (Laboratory)</a>                         | Grundlagen der Energietechnik (Labor)  | <a href="#">Energie und Systemverfahrenstechnik</a>   | Prof. Dr.-Ing. U. Krewer  | Prof. Dr.-Ing. U. Krewer     | <a href="mailto:u.krewer@tu-braunschweig.de">u.krewer@tu-braunschweig.de</a>           |         | summer   | Bachelor | Mechanical Engineering, Industrial Engineering   | MB-WuB-069    |  |
| <a href="#">Fundamentals of Nanotechnology</a>                                | Grundlagen der Nanotechnologie   | <a href="#">Partikeltechnik</a>   | Prof. Dr. G. Garnweitner  | Prof. Dr. G. Garnweitner     | <a href="mailto:g.garnweitner@tu-braunschweig.de">g.garnweitner@tu-braunschweig.de</a> |         | summer   | Master   | Mechanical Engineering, Industrial Engineering, Biochemical Engineering  | MB-IPAT-30    |  |
| <a href="#">Material resources efficiency in engineering</a>                  | Materialeffizienz im Ingenieurwesen  | <a href="#">Werkzeugmaschinen und Fertigungstechnik</a>   | Prof. Dr.-Ing. C. Herrmann  | Selin Erkisi-Arici           | <a href="mailto:s.erkisi@tu-braunschweig.de">s.erkisi@tu-braunschweig.de</a>           |         | summer   | Master   | Mechanical Engineering, Industrial Engineering, Biochemical Engineering  | MB-IWF-50     |  |
| Not available   | Technische Verbrennung und Brennstoffzellen (Labor)                            | <a href="#">Energie und Systemverfahrenstechnik</a>   | Prof. Dr.-Ing. U. Krewer  | Prof. Dr.-Ing. U. Krewer     | <a href="mailto:u.krewer@tu-braunschweig.de">u.krewer@tu-braunschweig.de</a>           |         | summer   | Master   | Mechanical Engineering, Automotive Engineering, Aerospace Engineering  | MB-WuB-089    |  |
| <a href="#">Post-processing of Numerical and Experimental Flow Data</a>       | Auswertung von numerischen und experimentellen Strömungsdaten                  | <a href="#">Strömungsmechanik</a>   | Dr. Richard Semaan  | Dr. Richard Semaan           | <a href="mailto:r.semaan@tu-braunschweig.de">r.semaan@tu-braunschweig.de</a>           |         | summer   | Master   | Aerospace Engineering  | MB-ISM-32     |  |
| <a href="#">Spaceflight Technology - Manned Spaceflight</a>                   | Raumfahrttechnik bemannter Systeme   | <a href="#">Raumfahrtsysteme / Space Systems</a>  | Dr. Peter Eichler (external lecturer)   | Kai Höfner                   | <a href="mailto:k.hoefner@tu-braunschweig.de">k.hoefner@tu-braunschweig.de</a>         |         | summer   | Master   | Biological and Chemical Engineering, Mechanical Engineering, Aerospace Engineering, Industrial Engineering, Automotive Engineering                         | MB-ILR-07     |  |
| <a href="#">Application of Commercial FE-Software</a>                         | Anwendung kommerzieller FE-Software  | <a href="#">Festkörpermechanik</a>  | Prof. Dr.-Ing. Markus Böhl, Dr.-Ing. Antonio Albero Bolea                         | Prof. Dr.-Ing. Markus Böhl   | <a href="mailto:m.boehl@tu-braunschweig.de">m.boehl@tu-braunschweig.de</a>             |         | winter   | Master   | Mechanical Engineering, Industrial Engineering, Mechatronics, Mobility and Traffics, Automobile Technology, Biochemical Engineering, Aerospace Engineering | MB-IFM-35     |  |
| <a href="#">Combustion Chemistry</a>  | Chemie der Verbrennung   | <a href="#">Verbrennungskraft-maschinen</a>   | Prof. Ravi Fernandes  | Prof. Ravi Fernandes         | <a href="mailto:ravi.fernandes@ptb.de">ravi.fernandes@ptb.de</a>                       |         | winter   | Master   | Mechanical Engineering, Automotive Engineering, Aerospace Engineering  | MB-IVB-16     |  |
| <a href="#">Dimensional Metrology for Precision Engineering</a>               | Dimensionelle Messtechnik für die Präzisions-Fertigungstechnik                 | <a href="#">Produktionsmesstechnik</a>  | Dr.-Ing. Gaoliang Dai (PTB)   | Prof. Dr.-Ing. Rainer Tutsch | <a href="mailto:r.tutsch@tu-braunschweig.de">r.tutsch@tu-braunschweig.de</a>           |         | winter   | Master   | Messtechnik und Analytik   |               |  |
| <a href="#">Electrochemical Energy Engineering</a>                            | Not available  | <a href="#">Energie und Systemverfahrenstechnik</a>   | Prof. Dr.-Ing. U. Krewer  | Prof. Dr.-Ing. U. Krewer     | <a href="mailto:u.krewer@tu-braunschweig.de">u.krewer@tu-braunschweig.de</a>           |         | winter   | Bachelor | Biological, Chemical and Pharmaceutical Engineering, Bioengineering, Industrial Engineering, Mechanical Engineering  | MB-WuB-29     |  |
| <a href="#">Finite Element Method II</a>                                      | Finite Elemente Methoden II  | <a href="#">Flugzeugbau und Leichtbau</a>   | Dr. Haupt / Prof. Horst   | Dr. M. Haupt                 | <a href="mailto:m.haupt@tu-braunschweig.de">m.haupt@tu-braunschweig.de</a>             |         | winter   | Master   | Aerospace, CSE, Mech. Engg.  | MB-IFL-01     |  |
| <a href="#">Fluid Mechanics</a>   | Strömungsmechanik  | <a href="#">Strömungsmechanik</a>   | Prof. Dr. R. Akkermans  | Prof. Dr. R. Akkermans       | <a href="mailto:r.akkermans@tu-braunschweig.de">r.akkermans@tu-braunschweig.de</a>     |         | winter   | Master   | Computational Science in Engineering   | INF-CSE-92    |  |
| <a href="#">Interdisciplinary research module - battery</a>                   | Interdisziplinäres Forschungsmodul Batterie                                    | <a href="#">Energie und Systemverfahrenstechnik</a>   | Prof. Dr.-Ing. U. Krewer, Prof. Dr.-Ing. Arno Kwade, Prof. Dr.-Ing. Jürgen Köhler | Prof. Dr.-Ing. U. Krewer     | <a href="mailto:u.krewer@tu-braunschweig.de">u.krewer@tu-braunschweig.de</a>           |         | winter   | Master   | Biological and Chemical Engineering  | MB-WuB-44     | Organized by three institutes, part of iPAT is in german |
| <a href="#">Life Cycle Assessment for sustainable engineering</a>             | Lebenszyklusanalyse für nachhaltiges Ingenieurwesen                            | <a href="#">Werkzeugmaschinen und Fertigungstechnik</a>   | Prof. Dr.-Ing. C. Herrmann  | Nicolas Bogнар               | <a href="mailto:n.bognar@tu-braunschweig.de">n.bognar@tu-braunschweig.de</a>           |         | winter   | Master   | Mechanical Engineering, Industrial Engineering, Biochemical Engineering  | MB-IWF-46     |  |
| <a href="#">Methods and tools for life cycle oriented vehicle engineering</a> | Methoden und Werkzeuge für ein lebenszyklusorientiertes Fahrzeugingenieurwesen | <a href="#">Werkzeugmaschinen und Fertigungstechnik</a><br><a href="#">Konstruktionstechnik</a> | Prof. Dr.-Ing. C. Herrmann, Prof. Dr.-Ing. Vietor                                 | Tobias Wagner                | <a href="mailto:t-a.wagner@tu-braunschweig.de">t-a.wagner@tu-braunschweig.de</a>       |         | winter   | Master   | Mechanical Engineering, Industrial Engineering, Biochemical Engineering, Electromobility   | MB-IWF-51     |  |

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|---|--|---|--|------------------------|--|--|--------|--------|--|-----------|--|
| <a href="#">Simulation of Turbulent Flow</a>                  | Simulation turbulenter Strömungen              | <a href="#">Strömungsmechanik</a>                       | Prof. Dr. R. Akkermans                                 | Prof. Dr. R. Akkermans | <a href="mailto:r.akkermans@tu-braunschweig.de">r.akkermans@tu-braunschweig.de</a>     |  | winter | Master | Aerospace Engineering, Mechanical Engineering  | MB-ISM-31 |  |
| <a href="#">Spaceflight Technology - Space Debris</a>         | Raumfahrtrückstände                            | <a href="#">Raumfahrtssysteme / Space Systems</a>       | Prof. Heiner Klinkrad                                  | Dr. Carsten Wiedemann  | <a href="mailto:c.wiedemann@tu-braunschweig.de">c.wiedemann@tu-braunschweig.de</a>     |  | winter | Master | Biological and Chemical Engineering, Mechanical Engineering, Aerospace Engineering, Industrial Engineering, Automotive Engineering | MB-ILR-06 |  |
| <a href="#">Sustainable Cyber Physical Production Systems</a> | Nachhaltige cyber-physische Produktionssysteme | <a href="#">Werkzeugmaschinen und Fertigungstechnik</a> | Dr.-Ing. S.Thiede,<br>Prof. Dr.-Ing. C. Herrmann       | Max Juraschek          | <a href="mailto:m.juraschek@tu-braunschweig.de">m.juraschek@tu-braunschweig.de</a>     |  | winter | Master | Mechanical Engineering, Industrial Engineering, Biochemical Engineering  | MB-IWF-58 |  |
| Not available   | Schwingungsmesstechnik                         | <a href="#">Adaptronik und Funktionsintegration</a>     | Prof.Dr.-Ing. Michael Sinapius,<br>Dr.Naser Al Natsheh | Dr.Naser Al Natsheh    | <a href="mailto:naser.natsheh@tu-braunschweig.de">naser.natsheh@tu-braunschweig.de</a> |  | winter | Master | Mechatronics   | MB-DuS-29 |  |

## Lectures held in German with additional support in English

| Titel in English   | Title in German  | Institute of   | Lecturer / Professor                                      | Contact Person             | E-Mail   | Credits | Semester | Degree   | Study programme / specialization  | Module number     | Support options                  |              |              |                        |  |
|--|--|--|---|----------------------------|--|---------|----------|----------|---|-------------------|----------------------------------|--------------|--------------|------------------------|--|
|  |  |  |   |                            |  |         |          |          |   |                   | Coaching in En                   | Slides in En | Script in En | Lecture in En possible | Other  |
| <a href="#">Advanced thermal separation processes</a>                | Thermische Verfahrenstechnik für Fortgeschrittene              | <a href="#">Chememische und Thermische Verfahrenstechnik</a> | Prof. Dr.-Ing. S. Scholl                                  | Prof. Dr.-Ing. S. Scholl   | <a href="mailto:s.scholl@tu-braunschweig.de">s.scholl@tu-braunschweig.de</a>       |         | summer   | Master   | Biotechnology, Pharmaceutical Engineering   | MB-ICTV-19        |                                  | No           | No           | Yes                    | Englisch repetition or multiple choice quizzes of previous lecture at start of following lecture |
| <a href="#">Aircraft Engine – Control and Operation</a>              | Regelung und Betriebsverhalten von Flugtriebwerken             | <a href="#">Flugtriebe und Strömungsmaschinen</a>            | Prof. Dr.-Ing. J. Friedrichs                              | Constance Heykena          | <a href="mailto:c.heykena@ifas.tu-bs.de">c.heykena@ifas.tu-bs.de</a>               |         | summer   | Master   | Mechanical Engineering, Aerospace Engineering   | MB-PFI-12         | Yes                              | No           | No           | No                     |  |
| <a href="#">Aircraft Engine Maintenance</a>                          | Triebwerks-Maintenance   | <a href="#">Flugtriebe und Strömungsmaschinen</a>            | Prof. Dr.-Ing. J. Friedrichs                              | Fabian Schur               | <a href="mailto:f.schur@ifas.tu-bs.de">f.schur@ifas.tu-bs.de</a>                   |         | summer   | Master   | Mechanical Engineering, Aerospace Engineering   | MB-PFI-13         | Yes                              | No           | No           | No                     |  |
| <a href="#">Aircraft Engine Thermodynamics</a>                       | Kreisprozesse der Flugtriebwerke                               | <a href="#">Flugtriebe und Strömungsmaschinen</a>            | Prof. Dr.-Ing. J. Friedrichs                              | Melanie Achmus             | <a href="mailto:m.achmus@ifas.tu-bs.de">m.achmus@ifas.tu-bs.de</a>                 |         | summer   | Bachelor | Mechanical Engineering  | MB-PFI-05         | Yes                              | No           | No           | No                     |  |
| <a href="#">Airfoil Aerodynamics-Theory and Experiment</a>           | Profilaerodynamik- Theorie und Experiment                      | <a href="#">Strömungsmechanik</a>                            | Prof. Dr. R. Radespiel                                    | Prof. Dr. R. Radespiel     | <a href="mailto:r.radespiel@tu-braunschweig.de">r.radespiel@tu-braunschweig.de</a> |         | summer   | Bachelor | Mechanical Engineering  | MB-ISM-21         | Yes                              |              |              |                        |  |
| <a href="#">Chemical Process Engineering</a>                         | Chemische Verfahrenstechnik                                    | <a href="#">Chememische und Thermische Verfahrenstechnik</a> | Prof. Dr.-Ing. S. Scholl                                  | Prof. Dr.-Ing. S. Scholl   | <a href="mailto:s.scholl@tu-braunschweig.de">s.scholl@tu-braunschweig.de</a>       |         | summer   | Bachelor | Biochemical, Chemical and Pharmaceutical Engineering, Mechanical Engineering, Industrial Engineering  | MB-ICTV-32 // -37 |                                  | No           | No           | No                     | Englisch repetition or multiple choice quizzes of previous lecture at start of following lecture |
| <a href="#">Continuum mechanics 1 - Matrix and tensor calculus</a>   | Kontinuumsmechanik 1 - Matrizen- und Tensorrechnung            | <a href="#">Festkörpermechanik</a>                           | Prof. Dr.-Ing. Markus Böhl                                | Prof. Dr.-Ing. Markus Böhl | <a href="mailto:m.boel@tu-braunschweig.de">m.boel@tu-braunschweig.de</a>           |         | summer   | Bachelor | Mechanical Engineering, Mathematics, Industrial Engineering   | MB-IFM-49         | Yes                              | Yes          | Yes          | Yes                    |  |
| <a href="#">Continuum mechanics and material theory</a>              | Kontinuumsmechanik und Materialtheorie                         | <a href="#">Festkörpermechanik</a>                           | Prof. Dr.-Ing. Markus Böhl, Dr.-Ing. Antonio Albero Bolea | Prof. Dr.-Ing. Markus Böhl | <a href="mailto:m.boel@tu-braunschweig.de">m.boel@tu-braunschweig.de</a>           |         | summer   | Master   | Mechanical Engineering, Industrial Engineering, Mobility and Traffics, Automobile Technology, Biochemical Engineering,  | MB-IFM-27         | Yes                              | Yes          | Yes          | Yes                    |  |
| <a href="#">Control Theory</a>                                       | Regelungstechnik   | <a href="#">Flugtriebe und Strömungsmaschinen</a>            | Prof. Dr.-Ing. J. Friedrichs                              | Daniel Giesecke            | <a href="mailto:d.giesecke@ifas.tu-bs.de">d.giesecke@ifas.tu-bs.de</a>             |         | summer   | Bachelor | Mechanical Engineering  |                   | Yes                              | No           | No           | No                     |  |
| <a href="#">Engine Components – Design, Operation, Maintenance</a>   | Bauelemente von Strahltriebwerken - Funktion, Betrieb, Wartung | <a href="#">Flugtriebe und Strömungsmaschinen</a>            | Prof. Dr.-Ing. J. Friedrichs                              | Andreas Kellersmann        | <a href="mailto:a.kellersmann@ifas.tu-bs.de">a.kellersmann@ifas.tu-bs.de</a>       |         | summer   | Bachelor | Mechanical Engineering  | MB-PFI-09         | Yes                              | No           | No           | No                     |  |
| <a href="#">Fundamentals of Air Traffic Control</a>                  | Grundlagen der Flugsicherung                                   | <a href="#">Flugführung</a>                                  | Prof. Dr. Dirk Kügler                                     | Renato Lumia               | <a href="mailto:r.lumia@tu-braunschweig.de">r.lumia@tu-braunschweig.de</a>         |         | summer   | Bachelor | LRT, KFZ, MB, MoVe, WiIng, Bio-Chelng, Tech.Or. M.  | MB-IFF-07         | No                               | Yes          | No           | Yes                    | written / oral exam in English possible  |
| <a href="#">Fundamentals of environmental engineering</a>            | Grundlagen der Umweltschutztechnik                             | <a href="#">Flugtriebe und Strömungsmaschinen</a>            | Prof. Dr.-Ing. J. Friedrichs; Dr.-Ing. Kampen             | Alexander Skorpel          | <a href="mailto:a.skorpel@ifas.tu-bs.de">a.skorpel@ifas.tu-bs.de</a>               |         | summer   | Bachelor | Mechanical Engineering  | MB-PFI-02         | Yes                              | No           | No           | No                     |  |
| <a href="#">Hybrid separation processes</a>                          | Hybride Trennverfahren   | <a href="#">Chemische und Thermische Verfahrenstechnik</a>   | Prof. Dr.-Ing. S. Scholl                                  | Prof. Dr.-Ing. S. Scholl   | <a href="mailto:s.scholl@tu-braunschweig.de">s.scholl@tu-braunschweig.de</a>       |         | summer   | Master   | Biochemical and Chemical Engineering, Mechanical Engineering, Industrial Engineering,   | MB-ICTV-04 // -25 |                                  | No           | No           | Yes                    | Englisch repetition or multiple choice quizzes of previous lecture at start of following lecture |
| <a href="#">Measurement Methods in Fluid Mechanics</a>               | Messmethoden in der Strömungsmechanik                          | <a href="#">Strömungsmechanik</a>                            | Dr. Stephan Bansmer                                       | Dr. Stephan Bansmer        | <a href="mailto:s.bansmer@tu-braunschweig.de">s.bansmer@tu-braunschweig.de</a>     |         | summer   | Master   | Aerospace Engineering, Automobile Engineering, Mechanical Engineering, mechanical engineering, bioengineering, Biological and Chemical Engineering, Aerospace Engineering, Pharmaceutical Engineering, Automotive Engineering, Industrial Engineering | MB-ISM-02         | Yes                              |              |              |                        |  |
| <a href="#">Microfluidic Systems</a>                                 | Microfluidic Systems   | <a href="#">Mikrotechnik</a>                                 | Prof. Dr. A. Dietzel                                      | Jonathan Kottmeier         | <a href="mailto:j.kottmeier@tu-braunschweig.de">j.kottmeier@tu-braunschweig.de</a> |         | summer   | Master   | Aerospace Engineering, Pharmaceutical Engineering, Automotive Engineering, Industrial Engineering   | MB-MT-038         | Yes                              | Yes          | No           | Yes                    |  |
| <a href="#">Numerical Analysis in Aerodynamics</a>                   | Analysis der numerischen Methoden in der Aerodynamik           | <a href="#">Aerodynamik und Strömungstechnik</a>             | Prof. Dr. C. Rossow                                       | Prof. Dr. C. Rossow        | <a href="mailto:cord.rossow@dlr.de">cord.rossow@dlr.de</a>                         |         | summer   | Master   | Aerospace Engineering   | MB-ISM-33         | Yes, directly after course hours |              |              |                        | Exam in English  |
| <a href="#">Principles of Microtechnology</a>                        | Grundlagen der Mikrosystemtechnik                              | <a href="#">Mikrotechnik</a>                                 | Prof. Dr. A. Dietzel                                      | Sven Meinen                | <a href="mailto:s.meinen@tu-braunschweig.de">s.meinen@tu-braunschweig.de</a>       |         | summer   | Bachelor | Mechanical Engineering, Biological Chemical and Pharmaceutical Engineering, Industrial Engineering  | MB-MT-025         | Yes                              | Yes          | No           | No                     |  |
| <a href="#">Safety and certification in aviation</a>                 | Sicherheit und Zertifizierung im Luftverkehr                   | <a href="#">Flugführung</a>                                  | Dr. Norbert Lohl  | Renato Lumia               | <a href="mailto:r.lumia@tu-braunschweig.de">r.lumia@tu-braunschweig.de</a>         |         | summer   | Master   | LRT, KFZ, MB, MoVe, WiIng, Bio-Chelng, ES   | MB-IFF-31         | No                               | Yes          | No           | Yes                    |  |
| Satellite technology and satellite operations                        | Satellitentechnik und Satellitenbetrieb                        | <a href="#">Raumfahrtssysteme / Space Systems</a>            | Prof. Dr. E. Stoll  | Benjamin Grzesik           | <a href="mailto:b.grzesik@tu-braunschweig.de">b.grzesik@tu-braunschweig.de</a>     |         | summer   | Master   | Biological and Chemical Engineering, Mechanical Engineering, Aerospace Engineering, Industrial Engineering, Automotive Engineering  | MB-ILR-62         | Yes                              | Yes          | Yes          | Yes                    |  |
| <a href="#">Thermal Turbomachinery</a>                               | Thermische Strömungsmaschinen                                  | <a href="#">Flugtriebe und Strömungsmaschinen</a>            | Prof. Dr.-Ing. H. Saathoff                                | Heiko Schwarz              | <a href="mailto:h.schwarz@ifas.tu-bs.de">h.schwarz@ifas.tu-bs.de</a>               |         | summer   | Master   | Mechanical Engineering, Aerospace Engineering, Process Engineering  | MB-PFI-12         | Yes                              | No           | No           | No                     |  |
| <a href="#">Adhesive Bonding</a>                                     | Fügetechniken für den Leichtbau                                | <a href="#">Füge- und Schweißtechnik</a>                     | Prof. Dr.-Ing. Klaus Dilger                               | Hinrich Grefe              | <a href="mailto:h.grefe@tu-braunschweig.de">h.grefe@tu-braunschweig.de</a>         |         | winter   | Master   | Mechanical engineering, industrial engineering  | MB-IFS-28         | Yes                              | No           | No           | No                     |  |
| <a href="#">Aerodynamics of Engine Components</a>                    | Aerodynamik der Triebwerkskomponenten                          | <a href="#">Flugtriebe und Strömungsmaschinen</a>            | Prof. Dr.-Ing. J. Friedrichs                              | Thorben Aufderheide        | <a href="mailto:t.aufderheide@ifas.tu-bs.de">t.aufderheide@ifas.tu-bs.de</a>       |         | winter   | Master   | Mechanical Engineering, Aerospace Engineering   |                   | Yes                              | No           | No           | No                     |  |
| <a href="#">Aeroengine Noise</a>                                     | Triebwerkslärm   | <a href="#">Strömungsmechanik</a>                            | Prof. Dr. R. Akkermans                                    | Prof. Dr. R. Akkermans     | <a href="mailto:r.akkermans@tu-braunschweig.de">r.akkermans@tu-braunschweig.de</a> |         | winter   | Master   | Aerospace Engineering   | MB-ISM-34         | Yes                              | Yes          |              |                        | Exam in English  |
| <a href="#">Aerospace Medicine - Aviation physiology</a>             | Luft- und Raumfahrtmedizin                                     | <a href="#">Flugführung</a>                                  | Dr. med. Claudia Stern                                    | Renato Lumia               | <a href="mailto:r.lumia@tu-braunschweig.de">r.lumia@tu-braunschweig.de</a>         |         | winter   | Master   | LRT, KFZ, MB, MoVe, WiIng, Bio-Chelng   | MB-IFF-32         | No                               | Partially    | No           | Yes                    | written / oral exam in English possible  |
| <a href="#">Air Traffic Management (ATM) - Advanced Applications</a> | Funktion des Flugverkehrsmanagements                           | <a href="#">Flugführung</a>                                  | Prof. Dr. Dirk Kügler                                     | Renato Lumia               | <a href="mailto:r.lumia@tu-braunschweig.de">r.lumia@tu-braunschweig.de</a>         |         | winter   | Master   | LRT, KFZ, MB, MoVe, WiIng, Bio-Chelng   | MB-IFF-08         | No                               | Yes          | No           | Yes                    | written / oral exam in English possible  |
| <a href="#">Aircraft Engine Design</a>                               | Entwurf von Flugtriebwerken                                    | <a href="#">Flugtriebe und Strömungsmaschinen</a>            | Prof. Dr.-Ing. J. Friedrichs                              | Phillip Reggentin          | <a href="mailto:p.reggentin@ifas.tu-bs.de">p.reggentin@ifas.tu-bs.de</a>           |         | winter   | Master   | Mechanical Engineering, Aerospace Engineering   | MB-PFI-11         | Yes                              | No           | No           | No                     | Mooc in English  |
| <a href="#">Airline-Operation</a>                                    | Airline-Operation  | <a href="#">Flugtriebe und Strömungsmaschinen</a>            | Prof. Dr.-Ing. J. Friedrichs                              | Caglar Atalayer            | <a href="mailto:c.atalayer@ifas.tu-bs.de">c.atalayer@ifas.tu-bs.de</a>             |         | winter   | Master   | Mechanical Engineering, Aerospace Engineering   | MB-PFI-14         | Yes                              | No           | No           | No                     |  |

|   |   |  |   |   |  |  |        |          |  |                   |                                  |     |                        |     |  |
|---|---|--|---|---|--|--|--------|----------|--|-------------------|----------------------------------|-----|------------------------|-----|--|
| <a href="#">Applications of Microtechnology</a>                   | Anwendungen der Mikrosystemtechnik                        | <a href="#">Mikrotechnik</a>                               | Prof. Dr. A. Dietzel, Dr.-Ing. M. Leester-Schädel | Jan Busche                                    | <a href="mailto:j.busche@tu-braunschweig.de">j.busche@tu-braunschweig.de</a>           |  | winter | Master   | Mechanical Engineering, Bioengineering, Biological and Chemical Engineering, Aerospace Engineering, Pharmaceutical Engineering, Automotive Engineering, Industrial Engineering | MB-MT-027         | Yes                              | Yes | No                     | Yes |  |
| <a href="#">Avionic systems</a>                                   | Avioniksysteme  | <a href="#">Flugführung</a>                                | Dr. Harro von Viebahn                             | Stephan Kocks                                 | <a href="mailto:s.kocks@tu-braunschweig.de">s.kocks@tu-braunschweig.de</a>             |  | winter | Master   | LRT, KFZ, MB, MoVe, WiIng, Bio-ChemIng, ES   | MB-IFF-12         | No                               | Yes | No                     | Yes |  |
| <a href="#">Calculation methods in aerodynamics</a>               | Berechnungsmethoden der Aerodynamik                       | <a href="#">Strömungsmechanik</a>                          | Prof. Dr. R. Radespiel                            | Prof. Dr. R. Radespiel                        | <a href="mailto:r.radespiel@tu-braunschweig.de">r.radespiel@tu-braunschweig.de</a>     |  | winter | Master   | Aerospace Engineering  | MB-ISM-20         | Yes                              |     |                        |     |  |
| <a href="#">Configuration Aerodynamics</a>                        | Konfigurationsaerodynamik                                 | <a href="#">Aerodynamik und Strömungstechnik</a>           | Prof. Dr. R. Rudnik                               | Prof. Dr. R. Rudnik                           | <a href="mailto:ralf.rudnik@tu-braunschweig.de">ralf.rudnik@tu-braunschweig.de</a>     |  | winter | Bachelor | Aerospace Engineering  | MB-ISM-13         |                                  | Yes |                        |     | Exam in English  |
| <a href="#">Continuum mechanics 2 - Basics</a>                    | Kontinuumsmechanik 2 - Grundlagen                         | <a href="#">Festkörpermechanik</a>                         | Prof. Dr.-Ing. Markus Böhl                        | Prof. Dr.-Ing. Markus Böhl                    | <a href="mailto:m.boel@tu-braunschweig.de">m.boel@tu-braunschweig.de</a>               |  | winter | Bachelor | Mechanical Engineering, Mathematics, Industrial Engineering  | MB-IFM-51         | Yes                              | Yes | Yes                    | Yes |  |
| <a href="#">Fundamentals of Numerical Methods in Aerodynamics</a> | Einführung in die numerischen Methoden in der Aerodynamik | <a href="#">Aerodynamik und Strömungstechnik</a>           | Prof. Dr. C. Rossow                               | Prof. Dr. C. Rossow                           | <a href="mailto:cord.rossow@dlr.de">cord.rossow@dlr.de</a>                             |  | winter | Master   | Aerospace Engineering  | MB-ISM-22         | Yes, directly after course hours |     |                        |     | Exam in English  |
| <a href="#">Fundamentals of thermal separation processes</a>      | Grundlagen der thermischen Verfahrenstechnik              | <a href="#">Chemische und Thermische Verfahrenstechnik</a> | Prof. Dr.-Ing. S. Scholl                          | Prof. Dr.-Ing. S. Scholl                      | <a href="mailto:s.scholl@tu-braunschweig.de">s.scholl@tu-braunschweig.de</a>           |  | winter | Master   | Biotechnology, Pharmaceutical Engineering  | MB-ICTV-36        |                                  | No  | No                     | No  | Englisch repetition or multiple choice quizzes of previous lecture at start of following lecture |
| <a href="#">Fundamentals of Turbomachinery</a>                    | Grundlagen der Strömungsmaschinen                         | <a href="#">Flugantriebe und Strömungsmaschinen</a>        | Prof. Dr.-Ing. J. Friedrichs                      | Kamsan Sivamorrthy                            | <a href="mailto:k.sivamoorthy@ifas.tu-bs.de">k.sivamoorthy@ifas.tu-bs.de</a>           |  | winter | Bachelor | Mechanical Engineering   | MB-PFI-04         | Yes                              | No  | No                     | No  |  |
| <a href="#">Grinding and Dispersion</a>                           | Zerkleinern und Dispergieren                              | <a href="#">Partikeltechnik</a>                            | Prof. Dr.-Ing. A. Kwade                           | Frederik Flach                                | <a href="mailto:f.flach@tu-braunschweig.de">f.flach@tu-braunschweig.de</a>             |  | winter | Master   | Biochemical engineering, Mechanical Engineering, Industrial Engineering, Pharmaceutical engineering  | MB-IPAT-21        | Yes                              | Yes | Yes                    | Yes |  |
| <a href="#">Hydraulic Turbomachinery</a>                          | Hydraulische Strömungsmaschinen                           | <a href="#">Flugantriebe und Strömungsmaschinen</a>        | Prof. Dr.-Ing. J. Friedrichs                      | Tobias Spuhler                                | <a href="mailto:t.spuhler@ifas.tu-bs.de">t.spuhler@ifas.tu-bs.de</a>                   |  | winter | Master   | Mechanical Engineering, Aerospace Engineering, Process Engineering   | MB-PFI-04         | Yes                              | No  | No                     | No  |  |
| <a href="#">Measurement in Turbomachinery</a>                     | Messtechnische Methoden für Strömungsmaschinen            | <a href="#">Flugantriebe und Strömungsmaschinen</a>        | Prof. Dr.-Ing. J. Friedrichs                      | Detlev Wulff                                  | <a href="mailto:d.wulff@ifas.tu-bs.de">d.wulff@ifas.tu-bs.de</a>                       |  | winter | Master   | Mechanical Engineering, Aerospace Engineering, Process Engineering   | MB-PFI-03         | Yes                              | No  | No                     | No  |  |
| <a href="#">Mechanical Behaviour of Engineering Materials</a>     | Mechanisches Verhalten der Werkstoffe                     | <a href="#">Werkstoffe</a>                                 | Prof. Dr. Joachim Rösler                          | changing contact person, announced in lecture |  |  | winter | Bachelor | Mechanical Engineering   | MB-IFW-31         | No                               | No  | Yes, complete textbook |     |  |
| <a href="#">Orbit and attitude control of spacecraft</a>          | Bahn- und Lageregelung von Raumfahrzeugen                 | <a href="#">Raumfahrtssysteme / Space Systems</a>          | Prof. Dr. E. Stoll                                | Mohamed Khalil Ben Larbi                      | <a href="mailto:m.ben-larbi@tu-braunschweig.de">m.ben-larbi@tu-braunschweig.de</a>     |  | winter | Master   | Biological and Chemical Engineering, Mechanical Engineering, Aerospace Engineering, Industrial Engineering, Automotive Engineering   | MB-ILR-64         | Yes                              | Yes | Yes                    | yes |  |
| <a href="#">Process Technology of Nanomaterials</a>               | Prozesstechnik der Nanomaterialien                        | <a href="#">Partikeltechnik</a>                            | Prof. Dr. G. Garnweitner                          | Pierre Stolzenburg                            | <a href="mailto:p.stolzenburg@tu-braunschweig.de">p.stolzenburg@tu-braunschweig.de</a> |  | winter | Master   | Biochemical engineering, Mechanical Engineering, Industrial Engineering, Pharmaceutical engineering, Biotechnology   | MB-IPAT-09        | Yes                              | Yes | Yes                    |     |  |
| <a href="#">Unit operations in fluid process engineering</a>      | Grundoperationen der Fluidverfahrenstechnik               | <a href="#">Chemische und Thermische Verfahrenstechnik</a> | Prof. Dr.-Ing. S. Scholl                          | Prof. Dr.-Ing. S. Scholl                      | <a href="mailto:s.scholl@tu-braunschweig.de">s.scholl@tu-braunschweig.de</a>           |  | winter | Bachelor | Biochemical, Chemical and Pharmaceutical Engineering, Mechanical Engineering, Industrial Engineering   | MB-ICTV-34 // -35 |                                  | No  | No                     | No  | Englisch repetition or multiple choice quizzes of previous lecture at start of following lecture |
| <a href="#">Wind turbine systems</a>                              | Systeme der Windenergieanlagen                            | <a href="#">Flugantriebe und Strömungsmaschinen</a>        | Prof. Dr.-Ing. J. Friedrichs                      | Detlev Wulff                                  | <a href="mailto:d.wulff@ifas.tu-bs.de">d.wulff@ifas.tu-bs.de</a>                       |  | winter | Master   | Mechanical Engineering, Aerospace Engineering, Process Engineering, Industrial Engineering   | MB-PFI-29         | Yes                              | No  | No                     | No  |  |