MITTEILUNGSBLATT

DER

Medizinischen Universität Innsbruck

Internet: http://www.i-med.ac.at/mitteilungsblatt/

Studienjahr 2009/2010 | Ausgegeben am 12. Mai 2010 | 30. Stück

Das Mitteilungsblatt erscheint jeweils am 1. und 3. Mittwoch jeden Monats.
Eigentümer, Herausgeber, Vervielfältigung, Vertrieb und für den Inhalt verantwortlich:
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149. Curriculum für den Universitätslehrgang „Master of Science in Clinical Biomedical Engineering“ an der Medizinischen Universität Innsbruck

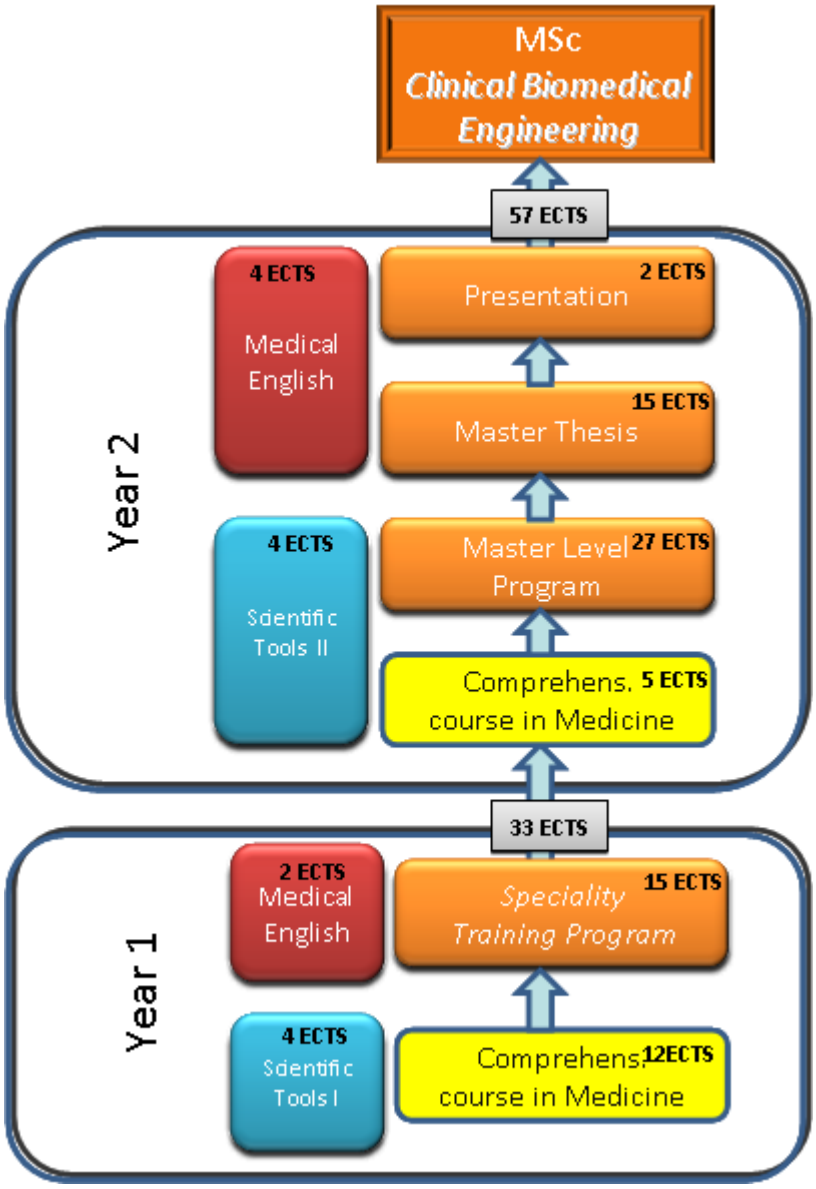
Der Senat hat in seiner Sitzung vom 5.5.2010 gemäß § 25 Abs 1 Z 10 iVm § 56 UG 2002 idgF folgendes Curriculum für den Universitätslehrgang „Master of Science in Clinical Biomedical Engineering“ erlassen:

Master of Science

in

Clinical Biomedical

Engineering



§ 1 Zielsetzung - Qualifikationsprofil

Der Lehrgang „MSc Clinical Biomedical Engineering“ richtet sich an Absolvent/innen technischer Studienrichtungen (Ingenieurswissenschaften, Elektrotechnik oÄ), die bereits Praxis in der Medizinproduktebranche sammeln konnten und ihr primäres Wissen im Bereich des Ingenieurwesens durch fundiertes Grundwissen der Medizin und des Bioengineerings erweitern wollen.

Ziel des Universitätslehrganges ist es, Absolvent/innen technischer Studienrichtungen, Wissen und Fertigkeiten im Bereich der Medizintechnik und der Biomechanik zu vermitteln. Die neu erworbenen Fähigkeiten versetzen die Absolvent/innen in die Lage, rasch, effizient und erfolgreich herausfordernde Aufgaben an der Schnittstelle von Medizin und Technik lösen zu können.
Der berufsbegleitend eingerichtete Lehrgang ist darauf ausgerichtet, mit einem hohen Praxisanteil medizinisches und medizintechnisches Wissen zu vermitteln. Insbesondere wird Augenmerk auf das klinisch technische Umfeld gelegt, welches das Arbeitsumfeld darstellt, in dem klinisch technische Lösungen primär zur Anwendung kommen.

Die vernetzte Zusammenarbeit von medizintechnischen und medizintechniknahen Arbeits- und Anwendungsgruppen an der Medizinischen Universität Innsbruck liefert praktische Einbindungsmöglichkeiten für die Teilnehmer/innen des Lehrganges, welche schlussendlich in innovativ hochwertigen Diplomarbeiten münden können.

Nach Abschluss des Universitätslehrgangs beherrschen die Absolvent/innen die Grundlagen und interdisziplinären Verknüpfungen beider Bereiche. Mit ihrer Master Thesis werden sie demonstriert haben, dass sie in der Lage sind, medizintechnische Lösungen mit hohem Innovationsgrad zu entwickeln. Durch die in diesem Lehrgang erworbenen Qualifikationen können die Absolvent/innen als Spezialisten an der zentralen Schnittstelle von Medizin und Technik auftreten.

§ 2 Zulassung

(1) Die Aufnahme der Lehrgangsteilnehmer/innen ist erstmalig im Wintersemester 2011/12 geplant.

(2) Aufnahmevoraussetzungen

In den Lehrgang können Personen mit folgenden Voraussetzungen aufgenommen werden:

Absolvent/innen eines technischen Studiums im Ingenieurwesen, Maschinenbau, Elektrotechnik oder vergleichbare.

(3) Aufnahmeverfahren und Zulassung

1) Bewerbungen um die Aufnahme in den Universitätslehrgang sind unter Beifügung der erforderlichen Unterlagen (Antragsformular, Lebenslauf und Motivationsschreiben sowie Bestätigungen über Abschlüsse und/oder Berufserfahrung jeweils in beglaubigter Kopie) fristgerecht einzubringen. Die Fristen werden vor Semesterbeginn jedenfalls auf der Homepage der Medizinischen Universität Innsbruck und in anderen geeigneten Medien festgelegt und bekannt gegeben.

2) Über die Aufnahme der Bewerber/innen entscheidet der/die Lehrgangsleiter/in auf der Grundlage der formalen Voraussetzungen und des Motivationsschreibens.

3) Personen, die in den Lehrgang aufgenommen wurden und den Lehrgangsbeitrag entrichtet haben, sind vom Rektorat als außerordentliche Studierende an der Medizinischen Universität Innsbruck zuzulassen.

§ 3 Dauer und Gliederung des Lehrgangs

Der Universitätslehrgang umfasst 90 ECTS-Anrechnungspunkte. Das entspricht einer Studiendauer von 4 Semestern.

§ 4 Bezeichnung Beschreibung der Lernziele der Module

(1) Unterrichtssprache ist Englisch

(2) Bei sämtlichen Modulen handelt es sich um Pflichtmodule.

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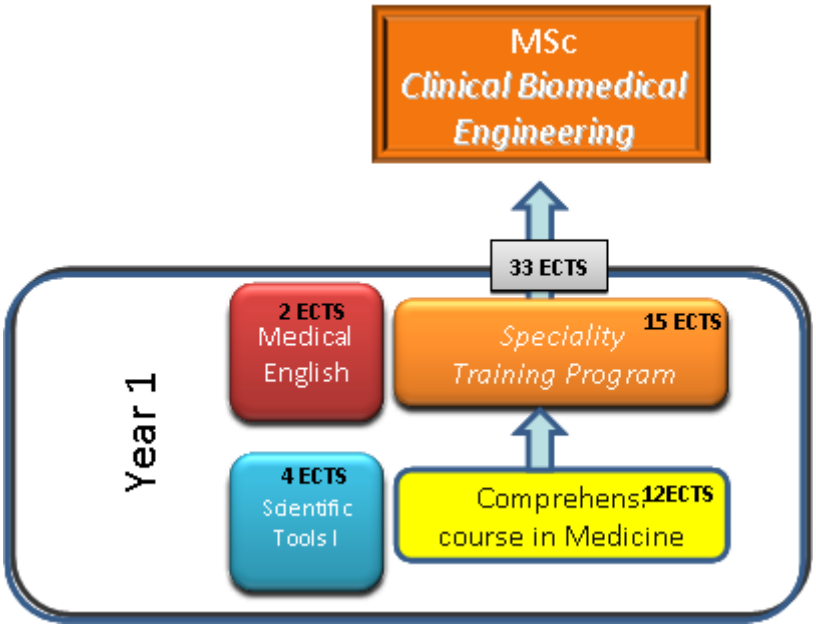

Class Name	Content	Overview	Notes
Medical English 2 ECTS	**Basic grammar** – usage review: nouns, pronouns, verbs, adjectives, adverbs **Punctuation** – appropriate usage of commas, semi-colons, colons, dashes, apostrophes, quotation marks **Spelling** – commonly misspelled and misused words **Sentence logic and clarity** – writing clearly and concisely **Compliant Language** – The legal and regulatory implications of specific words	After completing this course, students will be able to: 1) Identify correct or incorrect usage of nouns, punctuation, spelling, and sentence structure. 2) Edit sentences using correct grammar and punctuation. 3) Recognize when a sentence is unclear and know how to rewrite the sentence for clarity. 4) Identify and correct non-compliant language in an article, abstract, or manuscript.	This is an English review and "polishing" course. It is assumed students will enter the course with basic fluency in English. Each student will need the full version of Adobe 8.0 to review and edit documents. Some homework assignments will require electronic editing of documents. For other homework assignments, the student will need to print out the document, edit it according to the directions, save it as a PDF, and e-mail it back to the course instructor. All instruction and homework materials will relate to the field of medicine.
Scientific Tools Ia *Basic Statistics* 3 ECTS	**Basic biostatistical terminology** – mean, median, mode, power, significance, p value, Type I error, Type II error, confidence intervals, clinical significance vs. statistical significance, regression analysis, etc. **How to report statistics in medicine** – when and how to	After completing this course, students will be able to: 1) Define and use correctly basic statistical terminology 2) Report statistics correctly in journal articles and abstracts 3) Determine when to report statistics in verbal and/or graphical or	This course is designed for the non-scientist. No statistical software is required for this course.

	report statistics in text, when and how to report statistics using graphs, how to choose the right type of graph or table **Determining appropriate sample size and study power** – how to ensure significance can be achieved from analyzing study results	tabular form 4) Choose the best graphical or tabular method for reporting statistical outcomes 5) Identify the methods needed to correctly determine appropriate sample size and study power before a study is begun	
Scientific Tools Ib *Presenting Data* 1 ECTS	**Charts, tables, graphs** – using the correct media to report data **Designing posters** – choosing the best layout to convey the message **PowerPoint presentations** – how to create high impact slides	After completing this course, students will be able to: 1) Select the correct medium in which to display data from a scientific study 2) Evaluate the text, data and images for a scientific poster and determine the most appropriate design layout 3) Create clear, succinct, high impact PowerPoint presentations to report study progress and/or study results	Students will need to have PowerPoint software for this course and will need to have a basic understanding of PowerPoint functions.
General Anatomy and Physiology 2 ECTS	Basic principles of human anatomy. Overview of anatomic systems in morphology and their normal functioning.	After completing this course, students will be able to: 1) Describe the normal anatomy of the human body 2) Describe the	This course will use anatomic samples for visualization purposes.

		normal physiology of the fundamental biological systems in the human body	
Head / CNS 2 ECTS	Normal anatomy and physiology of the brain and the CNS pathologies will be discussed. Several treatment options will be introduced and explained. ENT as well as other aspects of the face will be covered.	After completing this course, students will be able to: 1) Describe pathologies of the brain, the CNS and the face 2) Identify several treatment options and strategies	
Thorax /Abdomen 2 ECTS	Based on the normal anatomy and physiology of the thorax and abdomen pathologies will be discussed. Several treatment options will be introduced and explained.	After completing this course, students will be able to: 1) Describe pathologies of the thorax and abdomen 2) Identify several treatment options and strategies	
Musculoskeletal System 2 ECTS	Pathologies of the musculoskeletal system as well as several treatment strategies will be discussed. This will include diseases, degenerative diseases, injuries to the musculoskeletal system	After completing this course, students will be able to: 1) Describe pathologies of the musculoskeletal system 2) Identify several treatment options and strategies	
Radiation in Medicine and Radiology	This course will elaborate on using radiation as a	After completing this course, students will be able to:	

1 ECTS	fundamental system in the diagnosis and treatment of a wide range of pathologies. Physics of radiation will be covered as well.	1) Describe the impact of radiation as a diagnostic and treatment tool 2) Explain the safety issues involved with using radiology as a diagnostic tool	
Anesthesia / Intensive Care 1 ECTS	This will include surgical anesthesia as well as pain management treatments. Primary focus will be on intensive care medicine for postoperative treatment and emergency medicine.	After completing this course, students will be able to: Describe how anesthesia is used differently for intensive care, postoperative care, and emergency medicine cases and explain why.	
Infection / Transmission / Protection 1 ECTS	Basic principles of infections, infectious agents, transmission and transmissible diseases will be explained. Protection against transmission and infection will be a main focus.	After completing this course, students will be able to: 1) Describe the process of infection and transmission 2) Explain why infectious diseases are an important field of medical research and writing 3) Know how to avoid contamination	

Working in the Hospital Environment 1 ECTS	In order to understand academic medicine it is necessary to understand how a hospital system functions. Roles, interactions and behavior in this critical environment will be explained and trained.	After completing this course, students will be able to: 1) Explain how a hospital works and identify the internal structure of a hospital 2) Describe the roles and responsibilities of the different departments	
Grant Writing 1 *Components of grant writing* 4 ECTS	How to find funding within the Austrian scientific funding system, maximizing the "potential impact" of a proposal, writing the abstract, writing the background, defining the need, the timeline, budget, evaluate tools to measure success, etc.	After completing this section, students will be able to: 1) Locate non-EU and EU (FP7) funding sources 2) Define and explain the components of a grant proposal 3) Maximize the impact potential of a grant proposal 4) Outline and write the core sections of a grant proposal	
Biomechanics 4 ECTS	**Biomechanics** • Mechanical characteristics of biological materials: Bone, cartilage and muscle tissue. The biomechanics of joints and their replacement by prostheses: Hip, knee, ankle, shoulder and elbow. • Biomechanics of	This course gives an overview of the range of applications of biomechanics and basic knowledge of project planning and construction of biomechanical systems.	

	the spine and prosthesis of the intervertebral discs. • Orthopedic braces • Prostheses for leg and arm amputees. • Biomechanics in urology • Dental prostheses • Trauma biomechanics. Characteristics of crash-test-dummies • Ergonomics		
Imaging techniques in medicine 2 ECTS	**Imaging techniques in medicine:** • Physical characteristics of images for clinical purposes • Principles of ultrasound. Echography and doppler sonographs. Tools with continuous or pulsating pulse-echoes. Different probes and strategies for visualization of information. Visualization via second generation contrast agents. • Biological effects of ultrasound. Ultrasound for therapeutic purposes. • The physical principles of x-rays. Interaction between x-rays and various materials. Short term and long term	The aim of the course is to familiarize the students with the basic application, standards and maintenance of the most common electro-medical therapeutic and diagnostic tools	To achieve this goal the basic European norms for medical equipment will be covered with a closer look at more specific norms and guidelines for the proper use and maintenance following after that.

	health risks. Protection from x-rays. • Devices for radiology. Digital radiology. Proper use of radio contrast agents. Norms for radiology. • Tomographic imaging. Computer tomography. Norms for computer tomography. • Physical principles of gamma-rays. Interaction between gamma-rays and materials. Radioactivity and decay of radioactive materials. • Machines for nuclear medicine. Gamma-camera und it's clinical application. SPECT and PET. • Magnetic resonance imaging. Magnetism and resonance. MR-Sequencing. Relaxation mechanisms of materials Magentic resonance devices Morphologic and functional studies. Use of contrast agents. Norms		
Biomaterials	**Biomaterials** This course presents an overview of the problems	Through the knowledge	

2 ECTS	in the characterization, project design and application of materials for bio-medical purposes. One major emphasis will be on the selection of materials for different applications based on their structural properties. The definitions of toxicity, biocompatibility and bioactivity will be discussed as well as how biological structures react to foreign substances. Contact areas of implants and biological structures. The issues in various areas of interest in medical technology will be described: the cardiovascular system, orthopedics, prosthetic dentistry, surgery, artificial organs, soft tissue implants. Relationships between structure and physiochemical properties of the most important classes of materials: metals and alloys, polymers, bioinert and bioactive ceramics, glasses and crystals, composite materials, biological materials	acquired the students will be able to choose the right material for a given end. Competence and know-how play a pivotal role when it comes to project design and evaluation of medical technology.	
Management of medical devices 1 ECTS	**Management of medical devices:** • Maintenance procedures, safety examinations, functional testing, replacement of the device • Health care technology assessment, risk management,	Work flow diagrams System thinking, iThink	

	health informatics • Administrative structures in the medical services, accounting Quality and accreditation		
Regulatory Overview *Submissions for Drugs and Devices (emphasis on devices)* 2 ECTS	Eucomed, Declaration of Helsinki, International Conference on Harmonization (ICH), how to use guidance documents, how to obtain a CE Mark, writing clinical study reports	After completing this section, students will be able to: 1) Explain the reasons for Eucomed, the Declaration of Helsinki, and ICH. 2) Know how to find and use guidance documents provided by the above. 3) Describe the basic process required to obtain a CE Mark 4) Outline the basic components contained in a clinical study report	

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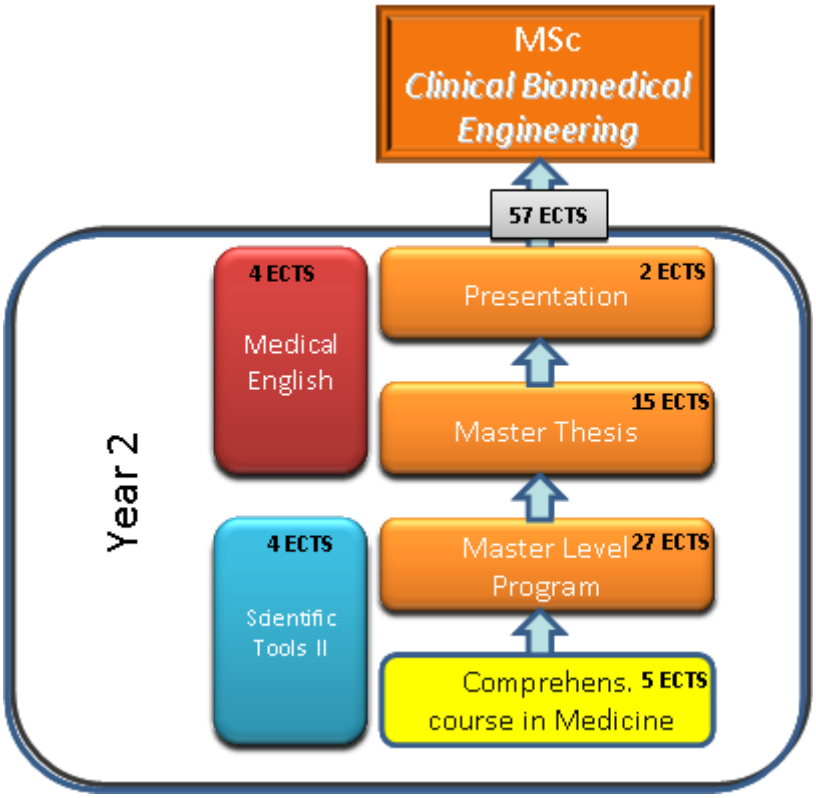

Class Name	Content	Outcome/Results	Notes
Medical English *Reading and editing the biomedical papers* 4 ECTS	How to read biomedical papers. Ensuring a consistent message Using references correctly Proof reading and copyediting	Students will be able to: 1) Read a biomedical paper and identify the important points of the paper. 2) Create an outline for a biomedical paper 3) Organize logically the parts of a biomedical paper 4) Use references/citations properly	
Scientific Tools II *Research study design* 4 ECTS	Interventional (clinical), observational, and cross-sectional trials, case control and cohort studies Prospective vs. retrospective studies Bench top (laboratory) studies, pre-clinical studies, clinical studies Ethical considerations Investigational review board (IRB) approval Creating the research question (thesis statement)	Students will be able to: 1) Describe the differences between and the pros/cons of interventional, observational, and cross-sectional studies as well as case-control and cohort studies. 2) Differentiate between prospective and retrospective studies and identify the pros/cons of each. 3) Explain the differences between	Students must be told at the beginning of this course that a subsequent course on research study design will require them to write a comprehensive research study design outline. Students should begin actively looking for study design opportunities/research partners

		laboratory, pre-clinical, and clinical studies 4) Explain the reasons why IRB approval is required for certain types of studies. 5) Create a research question (thesis statement).	
Current Frontiers in Medicine 5 ECTS	An overview of the current frontiers of research in selected fields of human medicine: 1. Neuroscience 2. Internal Medicine 3. Genetics 4. Molecular Biology 5. Musculoscelettal Medicine 6. Surgery	Students will be able to: 1) Identify current concepts of research in different fields of human medical research 2) Explain what the most pressing scientific questions are and what the main areas of research are 3) Provide general explanations of current research topics in selected medical specialties	Course will combine general overview lectures on the topics with experts in different research areas with individual elaboration of the topic and presentation of the finding to the group.
Electronics for medical equipment:	**Electronics for medical equipment:** Common Standards: • Guidelines for medical products 93/42/EWG by the European	The main goal of this course is to familiarize students with the functions of the most important and most widely used electronic	**Excercises:** • Classification of medical devices following the EC guidelines

6 ECTS	commission, CE-certification • General, specific and other security guidelines (IEC 601): Content, benefit for project design und administration of electro-medical devices Instruments for measuring biological signals and electrophysiology • Electrodes for measuring biopotentials: Functions, materials, electrical attributes of the electrodes, circuit models, guidelines for choosing specific electrodes • Electrocardiogram: Functions, schematic diagrams, specific guidelines, risks and precautions • Electroencephalogram: Functions, schematic diagrams, specific standards, risks and precautions • Electromyography: Functions, schematic diagrams, specific standards, risks and precautions • Electrogastrography, elektroretinography, devices to analyze evoked neuro-potentials • Endo-ECG: Risks and Precautions OR Devices for	medical devices for therapeutic and diagnostic purposes, most importantly the norms, maintenance and use of them. In order to achieve this goal the course will start with general European technical standards for medical devices and after that specific standards and guidelines for handling and maintenance will be covered. This will lay the foundations for interpreting the standards for the students.	for medical products 93/42/EWG • Characteristics of electrodes for measuring bio-potentials, relative circuits und project design of the front-end amplifier • Preparation of a technical report for the evaluation of scialitic lamps • Measurement of the leakage current in different medical devices • Preparation fort he preventive maintenance of electro-knives Characterization of an infusion pump and leakage currents in the patient.

	therapeutic use: • Operatory lights: Functions, specific standards, risks and precautions, technical details • OR tables: Design, specific standards, risks and precautions, technical details • Devices for electro-surgery: Functions, classification, schematic diagrams, safety measures to prevent injuries, specific standards, precautions for proper handling and preventive maintenance. • Defibrillators: Functions, classification, schematic diagrams, safety measures to prevent injuries, specific standards, precautions for proper handling and preventive maintenance • Infusion pumps: Functions, classification, schematic diagrams, safety measures to prevent injuries, specific standards, precautions for proper handling and functional checks • Dialysis machine: Functions, classification, schematic		

	diagrams, safety measures to prevent injuries, specific standards, precautions for proper handling.		
Medical Informationtechnology: 4 ECTS	**Medical informationtechnology:** Klinical informatics-systems (3 ECTS) • Characteristics of data and userinterfaces • Datasecurity and database systems • UML-Language • PACS and RIS • Standards and Guidelines • Interfaces between klinical informationssystems and medical devices Clinical Decision making Aids (1 ECTS): • Basic concepts of decisionmaking aids and methods Tools to repesent information	Define the technical requirements and test the implementation for a healthcare information system. The student has to be able to compare different platforms und adjust them to his needs.	**Excercises:** • Developme nt of a userinterfac e • Userinterfac e with data-analysis • Design of a robustness diagram, UML • Aid in clinical desicion-making • Evaluation of a platform for storing patient data
Life-support-systems 3 ECTS	• Rheology of liquids. Mechanical and dynamic behavior of liquids. The principle of energy conservation. Rheology of the blood. Methods to determine the components of the blood for the flow. Pump systems: characteristic curve of the pumping	The aim of this course is to teach basic knowledge on hydraulics (traditional as well as biological liquids), rheology, and hydraulic machinery, project design for artificial organs und	

	efficiency und functioning • The heart as a pump. Regulations of the amount of liquid pumped through the heart: Guyton Model • Valve-protheses. External blood circulation. Pumps for the blood. Blood gas regulation: Criteria for project design and regulation. • Approaches to project design for an artificial heart and artificial ventricles to support the circulation. Dimensioning of an accumulator for an artificial heart. Respirators	their application and interaction in a biological system.	
Mechanics applied to biological systems/gait analysis 4 ECTS	Mechanics applied to biological systems/gait analysis: The physiological systems are much more complex than technological systems and are influenced by variables not clearly definable. The aim of this course is, through mechanical-mathematical models of varying complexity, to make the mechanism and factors of the systems easier to understand and to improve the interaction with technological systems. • Motion analysis,	Knowledge of the functions of some important physiological systems will be taught and the interaction between man and machine in some biomedical systems will be explained.	

	examples with simplified models, solid body mechanics, multi-body-systems • Kinematics of multi-body systems, position and orientation matrices, eulersche angles, velocity and acceleration in serial kinematic structures, analogies with physiological systems. • Dynamics of multi-body systems: Analysis of cardinal-equations or with the energetic method, application for physiological systems • Mechanics of the musculoskeletal structures: Model of the parallel kinematic structures, kinematic and dynamic analysis, effects of the muscles • Kinematic and dynamic gait analysis: Gait characterization, physical and geometric properties of the body-parts, movement of the joints, experimental techniques for forces applied on the foot • Muscular System:		

	Structure oft he muscles, mechanical aspects of muscle-contraction, models and how they apply. • Orthoses, external prostheses, support-devices: Classification, typologies, structural and functional project design Respiratory System: Physiological breathing cycles, mechanical model of respiration, artificial respiration with overpressure or volumetric support.		
Finding information 2 ECTS	How to perform a literature review Using online bibliographic resources Understanding software programs for referencing: EndNote and/or Reference Manager	Students will be able to: 1) Use online bibliographic resources to conduct literature searches, including proper selection of key words and search strings 2) Use a referencing software program such as EndNote or Reference Manager, to create personal reference library files, download references	Students will need access to referencing software, such as EndNote

		from online bibliographic databases, and insert correctly formatted references into manuscripts	
Telemedicine - Telecommunications 4 ECTS	Telemedicine - Telecommunications • Network systems: Overview of the infrastructure of telecommunication systems and the data transmission systems which are used for telemedicine • Telemedical solutions: Overview of the established and commonly used applications and the European research projects concerning them. Guidelines for project design of patient-centered solutions, their functional and technological definitions as well as prototyping and the technical/economic potential will be discussed. Transversal topics: Backing up data and CME (Continuing Medical Education)	The aim of this course is to convey a general understanding of data transmission, the carriers and the transmission modalities as well as the processing of information for solutions and applications in telemedicine. The technical knowledge for introduction and evaluation of telemedical systems and their technical and functional integration in the wider electronic environment of medical operations.	
Writing the manuscript Part 1:	Types of articles – clinical study or scientific study results, letters to the editor, case reviews, tips &	Students will be able to: 1) Identify the different	

What kind of article? 2 ECTS	techniques, literature reviews Determining the best medium for publishing your message Levels of Evidence Writing and submitting scientific conference abstracts	options for submitting scientific data to journals 2) Determine the best submission option for the work 3) Explain the role of Levels of Evidence in the submission of scientific papers 4) Write an abstract for submission to a scientific conference 5) Write one (1) of the following: a case review, letter to the editor, or a tips & techniques article	
Writing the manuscript Part 2: *Sections of a manuscript* 2 ECTS	Abstract, Introduction, Materials/Methods, Discussion, Conclusion Acknowledgements Selection of and responsibilities of co-authors Acknowledgements – who to (or not to) include	Students will be able to: 1) Identify the sections of a scientific manuscript. 2) Describe specifically what should be included in each section of a manuscript and explain why it belongs there. 3) Write each section of a manuscript in its entirety	

		including correct references, figures, tables, graphs 4) Explain what does and does *not* constitute who is an author on a manuscript 5) Explain when to (or not to) include a person or an institution in the Acknowledgements section	
Masters Thesis (15 ECTS)	A fully written and submitted scientific manuscript, grant application or book articles required.	Students will be able to: perform a development project and report on it.	
Presentation of Thesis (2 ECTS)	Oral and PowerPoint presentation of the submitted manuscript is required.	Students will be able to: Summarize and present their manuscript findings to a panel.	

§ 5 Master Thesis

(1) Jeder/Jede Lehrgangsteilnehmer/in hat eine Master Thesis in Form einer schriftlichen Arbeit zu verfassen, die von dem/der jeweiligen Projektbetreuer/in beurteilt wird.

(2) Die Lehrgangsteilnehmer/innen haben bis zum Beginn des dritten Semesters ein Thema für die Master Thesis dem/der Lehrgangsleiter/in in schriftlicher Form vorzuschlagen. Gleichzeitig ist die Zustimmung des/der Betreuers/in vorzulegen. Das Thema und der/die Betreuer/in gilt als angenommen, wenn der/die Lehrgangsleiter/in diesen/diese innerhalb eines Monats nach Einlangen der Bekanntgabe nicht untersagt.

(3) Themen für die Master Thesis sind aus den unterrichteten Modulen zu wählen.

(4) Betreuer/in einer Master Thesis können alle Vortragenden des Universitätslehrganges sein.

§ 6 Prüfungsordnung

(1) Für das Prüfungswesen im Rahmen des Universitätslehrgangs sind die Bestimmungen der §§ 72 ff UG 2002 und die einschlägigen Bestimmungen des Satzungsteils „Studienrechtliche Bestimmungen der Medizinischen Universität Innsbruck“ anzuwenden.
(2) Für den erfolgreichen Abschluss des Universitätslehrgangs und zur Verleihung des akademischen Grades „Master of Science in Clinical Biomedical Engineering“ sind folgende Voraussetzungen zu erfüllen:

1. Positive Teilnahme an allen Veranstaltungen des Universitätslehrgangs (Pflicht- und gewählte Wahlfächer). Die Anrechnung von gleichwertigen Ausbildungsteilen durch die wissenschaftliche Leitung des Universitätslehrgangs ist möglich.
2. Approbation der Master Thesis durch die Prüfungskommission im Rahmen der Präsentation der Abschlussarbeit**.**

(3) Wenn alle Lehrveranstaltungen eines Moduls von dem/der Teilnehmer/in positiv abgelegt wurden, hat der/die Modulleiter/in die Modulnote für dieses Modul durch Addition der Prüfungsnoten und nachfolgende Division durch die Anzahl der Prüfungen zu ermitteln. Ist die ermittelte Zahl nicht größer als 1,5 – so hat der/die Teilnehmer/in das Modul „Mit Auszeichnung bestanden“. Ist die ermittelte Zahl größer als 1,5 – so lautet die Modulnote „bestanden“.

§ 7 Prüfungskommission

Die Prüfungskommission besteht aus von dem/der Vizerektor/in für Lehre und Studienangelegenheiten auf Vorschlag der Lehrgangsleitung aus dem Kreis der Lehrbeauftragten bestellten Prüfer/innen. Eine Prüfungskommission besteht aus mindestens drei einschlägig qualifizierten Mitgliedern.

§ 8 Bezeichnung für Absolventen/Absolventinnen des Universitätslehrgangs

Den Absolventen/innen des Universitätslehrgangs ist nach der positiven Beurteilung aller vorgeschriebenen Prüfungen und der Master Thesis die Bezeichnung „Master of Science in Clinical Biomedical Engineering“ – abgekürzt MSc - zu verleihen.

Für den Senat
Ao. Univ.-Prof. Dr. Michael Joannidis
Vorsitzender