Core Themes of Research in PhD Programmes

AT CHARLES UNIVERSITY IN PRAGUE
A Word of Introduction

The publication is designed to show the core themes of doctoral degree programmes (PhD) at the individual faculties of Charles University in Prague. These programmes are open to foreign doctoral students and academics from abroad who are interested in collaborating on the themes stated.

Prof. MUDr. Jan Škrha, DrSc., MBA
Vice-Rector for International Affairs and Mobility

General Information

Study at Charles University, contacts, links and other useful information:
http://www.cuni.cz/UKEN-1.html

Inter-university cooperation – an important basis for student exchanges and the exchange of research and teaching staff:
http://www.cuni.cz/UKEN-152.html

Overview of faculties

Rectorate

International Relations Department
Head: Ing. Ivana Halašková
Ovocný trh 3/5, 116 36 Praha 1
e-mail: ivana.halaskova@ruk.cuni.cz
zahran@ruk.cuni.cz
phone: +420 224 491 301/2
fax: +420 224 229 487

http://www.cuni.cz
Contents

- General Information about Charles University
  Rectorate / 3

- Core Themes of Research in PhD Programmes
  Catholic Theological Faculty / 5
  Protestant Theological Faculty / 6
  Hussite Theological Faculty / 7
  Faculty of Law / 8
  First Faculty of Medicine / 9
  Second Faculty of Medicine / 10
  Third Faculty of Medicine / 11
  Faculty of Medicine in Plzeň / 12
  Faculty of Medicine in Hradec Králové / 13
  Faculty of Pharmacy in Hradec Králové / 14
  Faculty of Arts / 16
  Faculty of Science / 19
  Faculty of Mathematics and Physics / 21
  Faculty of Education / 23
  Faculty of Social Sciences / 25
  Faculty of Physical Education and Sport / 27
  Faculty of Humanities / 29

Katolická teologická fakulta
Catholic Theological Faculty

Contact: Doc. PhDr. Mireia Ryšková, Th.D.
Vice-Dean for International Relations
Catholic Theological Faculty
Thákurova 3, 160 00 Praha 6
e-mail: ryskova@ktf.cuni.cz
phone: +420 220 181 395
fax: +420 220 181 234

Core Themes of Research in PhD Programmes

- Migration and Integration Ethics
  (Centre for Applied Ethics)
- Systematic, Pastoral and Biblical Theology
  (Centre for the History of Czech Theology)
- Spiritual Theology of the Christian East and West
  (Centre Pro Oriente Christiano)
- Moral Theology and Social Ethics
- Spiritual Sources of the Medieval Arts
- Modern Art in the Service of Ideal and Ideology
  (Centre for Theology and Art)
- History of Christian Art
- The Church and General History
- Catholic Theology
Evangelická teologická fakulta
Protestant Theological Faculty

Contact: Jan Roskovec, Th.D.
Vice-Dean for International Relations
Protestant Theological Faculty
Černá 9, 115 55 Praha 1
e-mail: roskovec@etf.cuni.cz
phone: +420 221 988 411
fax: +420 221 988 215

Core Themes of Research in PhD Programmes
- Exegetical and Historical Problems of Biblical Texts
- History and Theology of Reformation Christianity
- History and Theology of the Bohemian Reformation
- Current Issues of Christian Thought and Practice
- Hermeneutics of Christian Traditions
- Human Rights in Christian Perspective
- Current Issues of World Religions
- Philosophy from a Christian Perspective

Husitská teologická fakulta
Hussite Theological Faculty

Contact: ThDr. Kamila Veverková, Th.D.
Vice-Dean for Research and Science
Hussite Theological Faculty
Pacovská 350, 140 21 Praha 4
e-mail: kamila.veverkovaa@htf.cuni.cz
phone: +420 241 733 130
fax: +420 241 732 294

Core Themes of Research in PhD Programmes
- Theological Thought of the Bohemian Reformation
- Reform Movements within the Catholic Church in the 19th and 20th Centuries
- History and Theology of the Eastern Churches
- History and Religious Practice of the Jews in the Bohemian Lands
- Radical Issues in Catholic Modernism
Právnická fakulta
Faculty of Law

Contact:  Prof. JUDr. Milan Damohorský, DrSc.
Vice-Dean for International Affairs
Faculty of Law
nám. Curieových 7, 116 40 Praha 1
e-mail: damohors@prf.cuni.cz
phone: +420 221 005 370
fax: +420 224 810 472

Core Themes of Research in PhD Programmes

- Environmental Law
- European Law
- International Public Law

1. lékařská fakulta
First Faculty of Medicine

Contact:  Prof. MUDr. Otomar Kittnar, CSc., MBA
Vice-Dean for International Students
First Faculty of Medicine
Kateřinská 32, 121 08 Praha 2
e-mail: otomar.kittnar@staff.cuni.cz
phone: +420 224 968 483
fax: +420 224 964 358

Core Themes of Research in PhD Programmes

- Molecular, Cellular, and Pathophysiologica Basis of Diseases
- Metabolic Diseases and their Complications
- Neuropsychiatric Aspects of Neurodegenerative Diseases
- Comprehensive Oncology Research Programme
- Comprehensive Cardiovascular Research Programme
- Stomatological Diseases: Incidence, Mechanisms, Prevention, Therapy, Interactions
- Genetic Basis of Serious Paediatric Diseases
- Inherited Metabolic Diseases
- History of Medicine
Core Themes of Research in PhD Programmes

- Childhood Diabetes, Monogenic Endocrine Disorders
- Molecular Epidemiology of Pathogens in Cystic Fibrosis
- Developmental Kinesiology: Diagnosis and Treatment in Locomotor Pain Syndromes
- Dendritic Cell-Based Immunotherapy of Tumours
- Molecular Genetics and DNA Diagnostics in Paediatric Genetics, Including Paediatric and Adult Oncology; Reproductive Genetics
- A Complex Diagnostic Approach to Lymphomas and Soft Tissue Tumours
- Molecular and Clinical Characteristics of Childhood Acute Leukaemias
- Neuroscience

Contact: Doc. MUDr. Alexander Martin Čelko, CSc.
Vice-Dean for Foreign Affairs and International Mobility
Third Faculty of Medicine
Ruská 87, 100 00 Praha 10
e-mail: martin.celko@lf3.cuni.cz
phone: +420 224 902 485
fax: +420 272 738 497

Core Themes of Research in PhD Programmes

- Neurosciences
  Pain problems, epilepsy and depression problems
- Diabetes, Metabolism, Nutrition
  Spread of autoimmune insulitis, maturity onset of diabetes of the young, insulin resistance, problems of transfatty acids, nutrition of the minor population
- Cardiology
  Myocardial revascularization in ischemic heart disease, use of stem cells in cardiology
- Oncology
  Molecular genetic problems in prostate, breast, intestine, and lung cancer
- Traumatology
  Craniocerebral injuries
Lékařská fakulta v Plzni
Faculty of Medicine in Plzeň

Contact: Prof. MUDr. Vladislav Třeška, DrSc.
Vice-Dean for Research and Education
Faculty of Medicine in Plzeň
Husova 3, 305 06 Plzeň
e-mail: treska@fnplzen.cz
phone: +420 377 593 465
fax: +420 377 593 449

Core Themes of Research in PhD Programmes

- Replacement and Support of Vital Organs and Tissues
- Proteomic and Systems Biology Approaches to the Pathophysiology, Diagnosis and Treatment of Multiple Organ Dysfunction Syndrome
- Support of Circulatory and Lung Respiratory Function in Critically Ill Children
- New Diagnostic Protocols for the Treatment and Active Prevention of Multiple Organ Dysfunction
- Possibilities for Future Liver Remnant Volume Increase in Primary Unresectable Liver Tumours
- Colorectal Liver Metastases – New Diagnostic and Treatment Directions
- Ethiopatogenesis of Abdominal Aortic Aneurysm and Atherosclerotic Diseases

Lékařská fakulta v Hradci Králové
Faculty of Medicine in Hradec Králové

Contact: Prof. MUDr. Radek Pudil, Ph.D.
Vice-Dean for Research and Doctoral Study Programs
Faculty of Medicine in Hradec Králové
Šimkova 870, 500 38 Hradec Králové
e-mail: PudilR@lfhk.cuni.cz
phone: +420 495 834 786
fax: +420 495 513 597

Core Themes of Research in PhD Programmes

- Experimental and Clinical Studies of:
  - Biological effects of new drugs and materials
  - Malignant diseases
  - Cell therapy and regenerative processes
  - Civilization diseases (cardiovascular diseases, diabetes, etc.)
  - All aspects of ageing and nutrition
  - Diagnostic imaging for personalized medicine, especially in oncology
Core Themes of Research in PhD Programmes

- Syntheses of Potential Drugs and Studies of Structure–activity Relationships
- Pharmaceutical Analysis of Drugs and Other Biologically Active Substances
- Studies of Effects of Drugs in Various Experimental Pathological States
- Analyses of Factors Determining the Therapeutic Value, Consumption and Need for Drugs after their Introduction to Clinical Practice
- Studies of the Pharmacokinetic Profiles of Drugs with Focus on Interactions with Transport and Biotransformation Proteins
- Use of Polymers and Special Lipids for the Preparation of Biodegradable, Nanoparticle Dosage Forms and the Targeted Biodistribution of Drugs
- Studies of Medicinal Plants and their Therapeutically Significant Substances; Assessments of their Biological Activities, Toxicity and Possibilities for Biotechnological Production
Filozofická fakulta
Faculty of Arts

Contact: Doc. PhDr. Vojtěch Kolman, Ph.D.
Vice-Dean for Research
Faculty of Arts
nám. Jana Palacha 2, 116 38 Praha 1
e-mail: prodekan_veda@ff.cuni.cz
phone: +420 221 619 385

Doc. PhDr. Eva Voldřichová Beránková, Ph.D.
Vice-Dean for International Affairs
e-mail: prodekan_zahranici@ff.cuni.cz
phone: +420 221 619 832
fax: +420 221 619 382

Core Themes of Research in PhD Programmes

- **English and American Literature**
  1. Literary and Cultural Theory:
     - Rhetoric in philosophy and literature
     - Otherness in literature and cultural studies
     - Theories of performativity
     - Literature and technology (literate technologies)
     - Historical, modern and contemporary poetics
     - The politics of performance: drama in context
     - Literary feminisms: theory and practice
  2. Literary and Cultural History; Comparative Studies:
     - Mediaeval English manuscripts and poetry
     - Shakespeare’s drama and poetry

- **English Language**
  - Higher levels of the English grammatical system (functional morphology, (hyper)syntax)
  - History of the English language
  - Textual linguistics and stylistics
  - Pragmatics and discourse analysis
  - English lexicology and lexicography

- **Film Studies**
  - Czech cinema in the context of Central Europe – origins of the national cinemas, “new waves”, contemporary developments (post-1989)
  - Czech–German–Austrian film relations
  - Cinema and ideology, film culture under totalitarianism
  - Theories of cinema and visual culture

- **Egyptology**
  - Archaeology of Egypt in the 3rd and 1st millennia B.C.
  - Religion in Egypt

- **Logic**
  - Non-classical logics, their applications, their computational aspects
  - Set theory, other axiomatic theories containing arithmetic
  - Historical and philosophical aspects of logic and mathematics

- **Musicology (General Theory and History of Arts and Culture)**
  - Early music in Bohemia and in Central Europe (plainchant, vocal polyphony)
  - Bohemian music of the 17th and 18th centuries
  - The work of great Czech composers of the 19th and 20th centuries (Bedřich Smetana, Antonín Dvořák, Leoš Janáček, Bohuslav Martinů etc.)
  - Contemporary issues (including popular music)
Přírodovědecká fakulta
Faculty of Science

Contact: RNDr. Josef Novotný, Ph.D.
Vice-Dean for Development
and Foreign Relations
Faculty of Science
Albertov 6, 128 43 Praha 2
email: josef.novotny@natur.cuni.cz
phone: +420 221 951 396
fax: +420 221 951 598

Core Themes of Research in PhD Programmes

- Analytical Chemistry
- Inorganic Chemistry
- Organic Chemistry
- Biochemistry
- Physical Chemistry
- Macromolecular Chemistry
- Modelling of the Chemical Properties of Nano- and Biostructures
- Didactics of Chemistry
- Environmental Science
- Ecology
- Anthropology and Human Genetics
- Plant Anatomy and Physiology

History
- Erasmus Mundus Joint Doctorate TEEME: Text and Event in Early Modern Europe

Linguistics and Finno-Ugric Studies
- Linguistic typology
- Grammatical borrowing
- Individual and societal multilingualism
- Language management theory and language planning
- The Czech language and areal linguistics
- The contemporary sociolinguistic situation in the Czech Republic and Central Europe
- Ethnomethodological and conversation-analytic approaches to Czech language data
STARS – Supporting Talented PhD Research – is a program intended to support talented PhD students from the Czech Republic and from abroad. The objective of this program is to provide excellent education and an adequate income to PhD students of the Faculty.

For more information see: http://www.stars-natur.cz/

Core Themes of Research in PhD Programmes

- **Study Programme Computer Science**
  - Computer graphics and image analysis
  - Discrete models and algorithms
  - Mathematical linguistics
  - Software systems
  - Theoretical computer science

- **Study Programme Mathematics**
  - Algebra, theory of numbers and mathematical logic
  - General questions of mathematics and computer science
  - Geometry, topology, global analysis and general structures
  - Mathematical analysis
  - Probability and statistics, econometrics and financial mathematics
  - Scientific and technical calculations

**Contact:**
Doc. RNDr. František Chmelík, CSc.
Vice-Dean for Student Affairs
Faculty of Mathematics and Physics
Ke Karlovu 3, 121 16 Praha 2
e-mail: Frantisek.Chmelik@mff.cuni.cz
phone: +420 221 911 405
fax: +420 221 911 490
Study Programme Physics
- Biophysics, chemical and macromolecular physics
- Geophysics
- Mathematical and computer modelling
- Meteorology and climatology
- Nuclear physics
- Physics education and general problems of physics
- Physics of condensed matter and materials research
- Physics of nanostructures
- Physics of plasma and ionised media
- Physics of surfaces and interfaces
- Quantum optics and optoelectronics
- Subnuclear physics
- Theoretical physics, astronomy and astrophysics

Core Themes of Research in PhD Programmes

- The Ongoing Metamorphoses of the Teaching Profession
- Inclusive Education and Initial Literacy Development
- Professional Development for Teachers
- Analogies and Differences in the Curricula of a Particular School Subject in Selected Countries
- Quality and Efficiency in Education
- Visual Discourse and Art Education
- Teaching Visual Culture through Semiosis: transforming postmodern paradigms in art education
- The Issue of General Music Education in the European Context
Core Themes of Research in PhD Programmes

- Modern History of North America, Europe and Eurasia
  (Institute of International Area Studies)
  • Cold War ethnic and nationality problems
  • Culture, historiography and science
  • Jewish history
  • Memory and politics of history

- Area Studies with Respect to North America, Europe and Eurasia
  (Institute of International Area Studies)
  • Energy and pipelines
  • Integration
  • Migrations
  • Post-Communist transformation
  • Regionalism

- Media Studies
  (Institute of Communication Studies and Journalism)
  • Contemporary media development
  • The history of the Czech mass media

For application forms and further information, please see:
Core Themes of Research in PhD Programmes

**Biomechanics**
- Functional, structural and dimensional response of tissues, organs and organ systems to a dynamic stress field
- Artificial materials and their rheology
- Kinematic and dynamic response of the musculoskeletal system of humans in 3D interaction with the environment
- Problems in forensic biomechanics and their interdisciplinary solutions
- The biomechanics of injury and transport safety, interdisciplinary approaches

**Kinanthropology**
- Social scientific aspects of human movement studies
- Psycho-social functions of physical activities, values and ethics of sport as a part of the quality of life
• Sport and socialisation, sport as a tool of integration for specific population groups
• Active lifestyle, its biological and psycho-social determinants
• Health-related fitness and physical activity programmes for selected population groups, such as children and youth, people with disabilities, and seniors
• Biological aspects of the investigation of human movement
• Training of top athletes and diagnostics of movement performance predispositions
• Body composition, obesity and overweight
• Adapted physical activity

Fakulta humanitních studií
Faculty of Humanities

Contact: Ing. Jana Jeníčková, Ph.D.
Vice-Dean for PhD Degree Study Programmes
Faculty of Humanities
U Kříže 8, 158 00 Praha 5
email: jana.jenickova@fhs.cuni.cz
phone: +420 251 080 351
fax: +420 251 620 611

International Office:
email: international@fhs.cuni.cz
phone: +420 251 080 334

Core Themes of Research in PhD Programmes

● General Anthropology
  ● Cultural and social problems of the integration of minorities
  ● The anthropology of violent conflicts
  ● The ethology of the urban population
  ● Xenophobia and anti-Semitism in contemporary societies

● Applied Ethics
  ● Informed consent in practice
  ● Ethics, morals and the law
  ● Theoretical foundations of human rights

● Environmental Studies
  ● Relationships between health and the environment