

Charles University in Prague information

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

<http://www.cuni.cz/UKEN-157.html>

● Rectorate

International Relations Department

Head: Ing. Ivana Halašková

Ovocný trh 3/5, 116 36 Praha 1

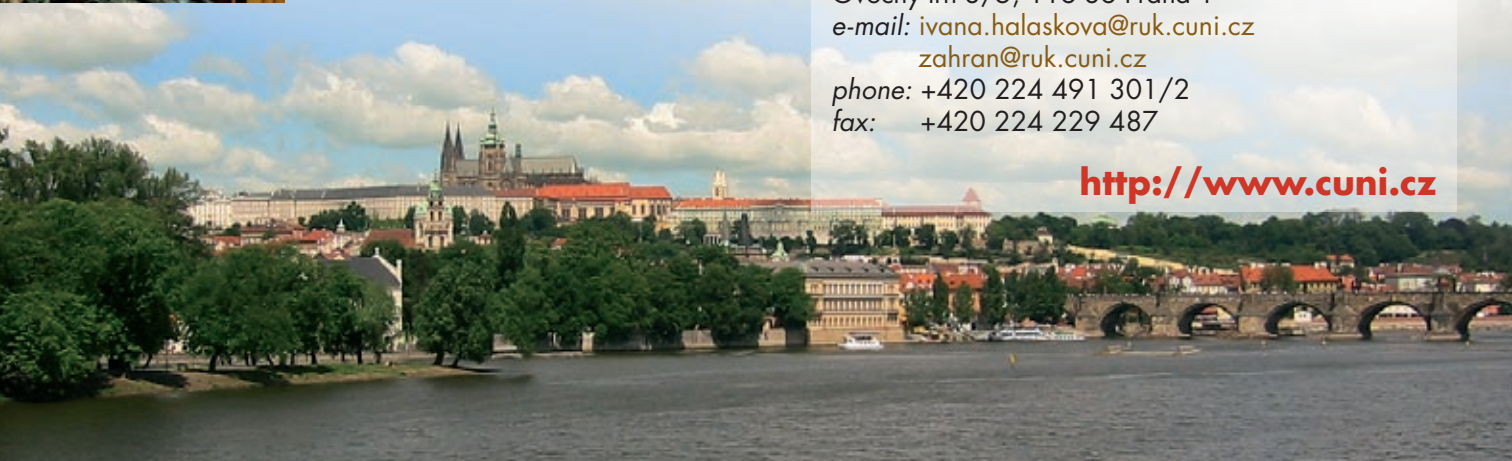
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Katolická teologická fakulta Catholic Theological Faculty

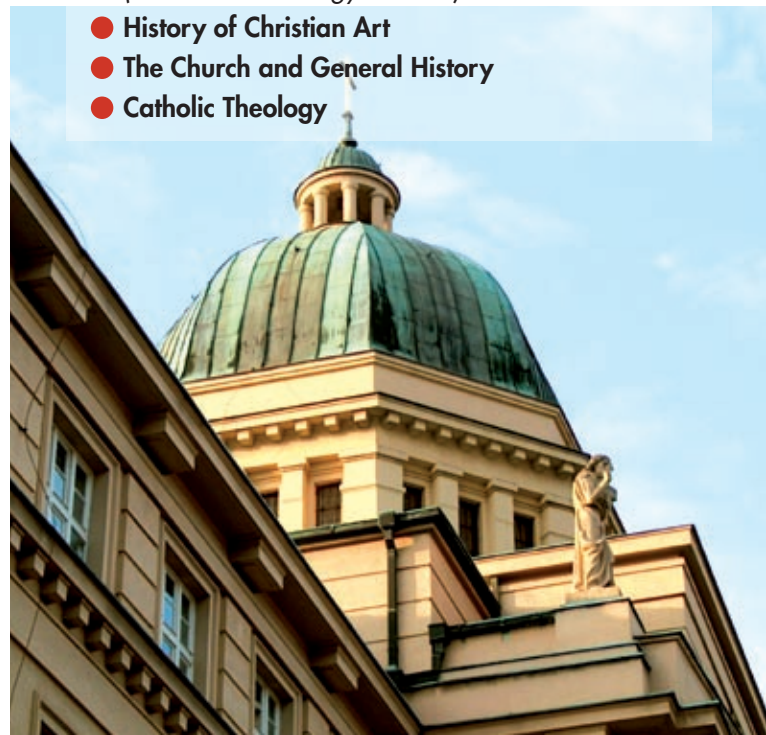
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Core Themes of Research in PhD Programmes

- **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**

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



Evangelická teologická fakulta Protestant Theological Faculty



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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

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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 Practise of the Jews in the Bohemian Lands
- Radical Issues in Catholic Modernism



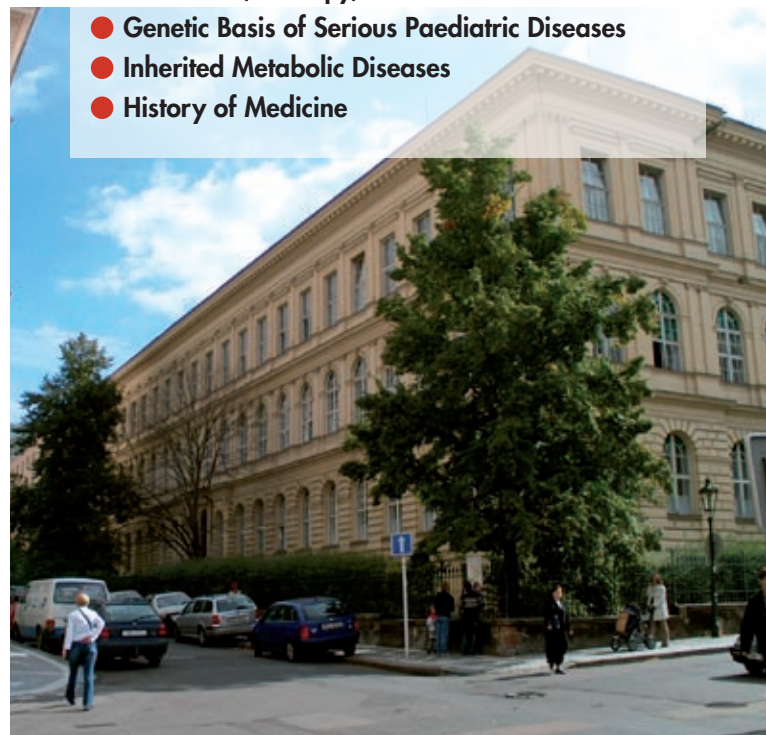


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Core Themes of Research in PhD Programmes

- Molecular, Cellular, and Pathophysiological 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



Právnická fakulta Faculty of Law

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Core Themes of Research in PhD Programmes

- Environmental Law
- European Law
- International Public Law

2. lékařská fakulta Second Faculty of Medicine

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Vice-Dean for Science, Research
and Graduate Education
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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



3. lékařská fakulta Third Faculty of Medicine



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Core Themes of Research in PhD Programmes

- **Neurosciences**
Pain problems, epilepsy and depression problems
- **Diabetes, Metabolism, Nutrition**
Spread of autoimmune insulinitis, maturity onset of diabetes of the young, insulin resistance, problems of trans fatty 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

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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.
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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



**Farmaceutická fakulta
v Hradci Králové**
**Faculty of Pharmacy
in Hradec Králové**



Contact: Assoc. Prof. PharmDr. Petr Nachtigal, Ph.D.
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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

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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

- Women and early modern literature and culture
- Romanticism: comparative study
- American transcendentalism: R.W. Emerson
- The Modernist novel: James Joyce
- Diasporic fiction in English
- Twentieth century drama and theatre: Britain and Ireland
- Twentieth century poetry: Britain and Ireland
- Twentieth century American fiction 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

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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

- Botany
- Molecular and Cell Biology, Genetics and Virology
- Developmental and Cell Biology
- Animal Physiology
- Parasitology
- Immunology
- Microbiology
- Zoology
- Philosophy and History of Science
- Theoretical and Evolutionary Biology
- Geology
- Applied Geology
- Cartography, Geoinformatics and Remote Sensing
- General Issues in Geography
- Regional and Political Geography
- Social Geography and Regional Development
- Physical Geography and Geoecology
- Demography

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/>



Matematicko-fyzikální fakulta Faculty of Mathematics and Physics

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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



● 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

Pedagogická fakulta Faculty of Education

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Contact person Mgr. Helena Rambousková
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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



- A Complex Analysis and Educationally Based Interpretation of a Work of Contemporary Art
- Educational Overtones of Contemporary Music Production
- Philosophy of Education
- The Care of the Soul – the Origin of Education
- The Landscape from the Phenomenological Point of View
- Education of Students with Special Educational Needs
- Educational Psychology in the Broader Context of Psychology and Social Sciences

For application forms and further information, please see:
<http://www.pedf.cuni.cz/index.php?menu=100&lang=en>



Fakulta sociálních věd Faculty of Social Sciences

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 fax: +420 224 235 644

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

- Methodological and theoretical problems of media studies
- Journalism studies
- Media cultures
- **Economics**
(*Institute of Economic Studies*)
 - Alternative approaches to economic modelling (computational economics)
 - Economic development of developing countries
 - Economic theory of political markets
 - Nonlinear dynamic economic systems
 - Theory of public finance and pension systems
 - Experimental economics
- **International Relations**
(*Institute of Political Studies*)
 - The European Union after eastern enlargement (institutional aspects)
 - Common foreign and security policy/European security and defence policy
- **Political Science**
(*Institute of Political Studies*)
 - Czech and Central European politics
 - National identity in contemporary Europe
 - Comparative politics, electoral studies
 - Transition to democracy
 - Migration
 - Multilevel governance
- **Sociology**
(*Institute of Sociological Studies*)
 - Czech society in European context
 - Advanced social research methodology (quantitative & qualitative)
 - History of and current trends in sociological theory
- **Public and Social Policy**
(*Institute of Sociological Studies*)
 - Applied policy analysis
 - Theory and practice of public policy and administration
 - Strategic governance
 - The development of the welfare state
 - Europeanisation of national public and social policies



Fakulta tělesné výchovy a sportu Faculty of Physical Education and Sport

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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

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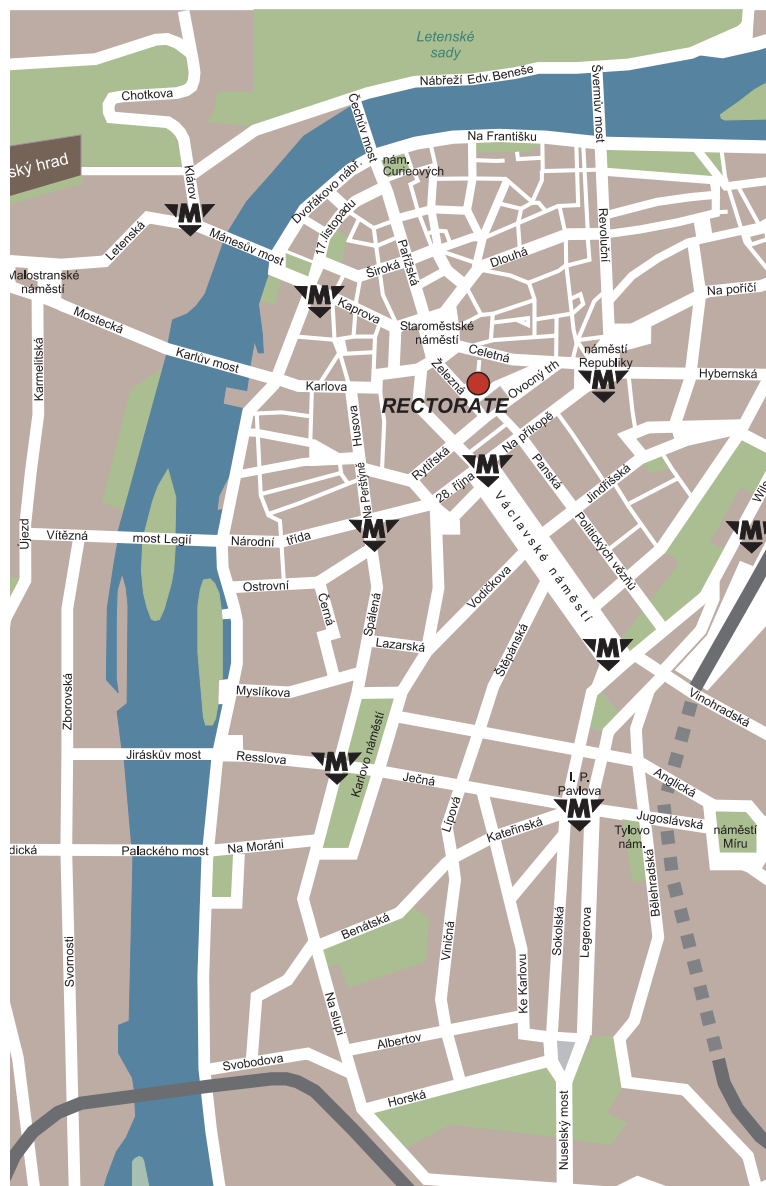
International Office:
 e-mail: international@fhs.cuni.cz
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Core Themes of Research in PhD Programmes

- **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



- Research and development of aggregated indicators
- Policy of sustainable development
- Environmental economics
- **Civil Sector Studies**
 - Civil society, citizenship and democracy
 - Multicultural civil society
 - Legal framework of organisations in the civil sector
 - Volunteering and philanthropy
 - Social economy and social entrepreneurship
- **Historical Sociology**
 - Comparative analysis of civilisations
 - Modernisation processes and globalisation
 - Social change and armed conflicts
 - Formation of states, nations and nationalisms
- **German and French Philosophy**
 - Concept of reason in German idealism
 - Phenomenology of perception and of the body
 - The question of being and Heidegger's philosophy
 - Development of Husserl's concept of phenomenology
- **Semiotics and Philosophy of Communication**
 - Signs, signification and semiotics from the philosophical point of view
 - Cultural semiotics and sociosemiotics
 - Models of communication
 - Non-linguistic sign systems



This booklet was published by the **International Relations Department of Charles University in Prague.**
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