

PhD Study

I. Brunel University: traditional PhD study

II. Advanced graduate program (US)

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IV. Vocabulary that every PhD student should be familiar with

I. Brunel University: traditional PhD study

Brunel University

awards the following **research degrees**:

MPhil = Master of Philosophy (a less demanding research degree),

PhD = Doctor of Philosophy.

Other doctorate degrees:

EngD = Engineering Doctorate,

New Route PhD.

(For more information on the two last mentioned degrees see Brunel's website.)

Traditional PhD study

Traditional PhD study is available both full-time (over 3 - 4 years) and part-time (over 4 - 8) years. PhD students may commence their work at any point in the year and are expected to study around 44 weeks in each year. They work closely with the academic staff. Much experimental and laboratory work has to take place outside normal working hours - sometimes in the evenings or at weekends.

Students agree with their supervisors, at the beginning of their course, on a schedule of meetings, a timetable of work (including taught courses, seminars and conferences to be attended) and possible submission dates. To complete their degree programme successfully, they are expected to:

- follow a programme of induction and training on research methods,
- achieve a satisfactory level of performance in any required taught courses,
- attend lectures, courses and colloquia as directed by their supervisors,
- carry out an approved programme of research to a satisfactory standard.

There may be opportunities for research students to undertake teaching for taught course students and the University also provides training for those who wish to be employed in this way.

PhD study involves an in-depth exploration of a research topic. Research students have to produce, at least annually, a short formal report on their progress for discussion with their supervisors and other members of academic staff. After successful completion of a research project, the student presents a thesis and, if this is judged satisfactory, a research degree may be awarded.

PhD Thesis

In the thesis, a student must demonstrate a sound knowledge and critical appreciation of his or her discipline. The thesis must also make a distinct and original contribution to knowledge in that discipline. The material has to be organized and presented in a clear and appropriate style in the English language and be suitable for publication.

The thesis is presented at a viva voce examination.

Topics to be discussed when you have finished reading the text.

1. Compare PhD study at Brunel and at your University. Concentrate on the following points and say in which respects you find the Brunel or the Czech system preferable:
 - degree types,
 - duration of study,
 - commencement of study,
 - yearly workload,
 - study plan,
 - requirements to be met in order to complete the PhD programme,
 - research and teaching assistantships,
 - annual report,
 - PhD thesis requirements,
 - form of final examination.
2. Did you spend a part of your undergraduate/postgraduate studies at a foreign university? What did you have to do to get there? What was the main benefit you gained from your study stay?

Notes:

1. The **University of Birmingham** research degrees are similar to those offered by Brunel University. The length of the degree courses is also similar.
Full-time PhD courses last for 3 years and the writing-up period is 1 year.
Part-time PhD courses last over 6 years and the writing-up period is 1 - 2 years.
2. Being on a **postgraduate** (in the US graduate) course **does not necessarily mean** that you are studying for a **PhD**. Therefore say clearly what type of programme you are taking.
3. Note the **spelling: programme (BE), program (AE) = course of study**
computer program (both BE and AE)

II. Advanced graduate program (US)

Ph.D. program

Duration: 4 - 5 years (full-time)

Application

- evaluation of academic performance from the former school
- previous program of study
- letters of recommendation
- personal statement

Admission requirements

- completion of certain courses
- graduation with a Master's Degree in (as required)

Coursework, examinations and research

Coursework

in (as required) credited courses

core courses: 3/5

elective courses: 2/5

individual study

Preliminary comprehensive examinations

qualifying for matriculation to begin research for the

dissertation/doctoral thesis

- written closed-book examination covering the courses taken (at the end of the first year - retake is possible)
- oral examination - demonstrating preparedness for research and profound knowledge of a special area (taken on submission of a written research proposal at the end of the second year, then full matriculation)

Research

- in-depth knowledge of a research area
- its application to a problem
- report on annual progress (every year)
- submission and defense of the dissertation/doctoral thesis

Thesis requirements

- good scientific writing (logic, grammar, presentation)
- 600-word abstract

Final examination

- oral presentation of results
- defense of dissertation/doctoral thesis (public)
- closed examination in

Topic for discussion:

Comment on both the admissions procedure and the Ph.D. program itself, focusing on the differences between this program and the programmes offered by your University and Brunel.

III. Research degrees: making an application

Although the advice given below applies to Brunel University, the steps to be taken are applicable to other universities as well.

Application

When you make an application, you will need to identify the School or Research Institute in which you wish to conduct your research. It is thus a good idea to familiarize yourself with the research that is conducted at Brunel and decide where your own research would best fit. You may also want to ensure that there are potential supervisors within the University with the appropriate interests and expertise to supervise your work.

Advice on your application

Specialist Research Institutes at Brunel publish information and advice for research applicants on their websites. Many research areas will also publish specific guidelines on preparing a research proposal to submit with your application. If you have identified a potential research supervisor at Brunel, it can be useful to contact them informally prior to making your application. They may be able to give more specific advice for your own discipline and some may be willing to comment on a draft research proposal. General contacts for enquiries can also be found on individual School websites.

Preparing your research proposal

Most Schools and Specialist Research Institutes require a research proposal, usually between 1000 and 2000 words, as part of the application process. Many issue specific guidance on what should be included and this should be followed carefully. Typically, you might be expected to describe the context of the work (academic background and why the research is needed), define the aims and objectives of the work, and describe how you will approach the research (research methods to be used, rough plan of work).

Documents needed for application:

- an academic transcript for every previous degree you have completed,
- an academic reference from the academic institution you most recently attended,
- a second academic reference from your current or most recent employer,
- a copy of paperwork confirming the award of sponsorship,
- any relevant certificates for language qualifications (e.g. IELTS, TOEFL),
- a brief personal statement in support of your application,
- any relevant certificates,
- any other relevant documentation (e.g. a CV),
- research proposal/statement (a description of your proposed research)

When you have read the text, summarize the information, focusing on:

- the first steps to be taken,
- the research proposal (what information it should contain),
- documents to be enclosed with the application.

Topic for discussion

Are you planning a study stay abroad during your PhD studies? If so, when and where? What steps have you already taken? What will be the purpose of your stay?

IV. Vocabulary that every PhD student should be familiar with

PhD/doctoral study programme/PhD degree course/PhD study

Admission requirements, types of programmes, duration

to have/hold a Master's degree in ...

to pass an entrance examination

to satisfy/meet the academic and professional requirements

to judge the student's academic attainments/achievements, special abilities and interests

to be admitted to/registered for a PhD course

doctoral enrolment/intake

joint degree programme, joint degree

the PhD course extends for/lasts/takes/ ... years

Phrases to be used about PhD students

I am a PhD student at the Faculty of ...

I am a first-year PhD student

I am in the second year of my PhD studies

I am studying for a PhD degree on/in ...

I am on a PhD course on/in ...

Content and organization of PhD study

study plan: timetable (BE), schedule (AE)

to set deadlines for ...

coursework/taught courses (lectures, seminars, experimental and laboratory work, tutorials)

training in research methods and presentation skills

do/carry out research in the department laboratory or another research facility

teaching assistant, to teach/run courses on/in

research assistant, to participate in/be involved in a research project

supervisor (BE), adviser (AE)

supervisor specialist, co-supervisor

to work under the supervision/guidance of (wrong: under the direction/leadership)

study stays abroad, to go on a study stay; internship, intern

to participate in international conferences, workshops, seminars

to write a doctoral thesis/dissertation (wrong: to work out, elaborate)

the writing-up period lasts ... year/s

to submit a thesis

Examinations

to pass all the examinations listed in the study plan

state doctoral examination

to defend one's thesis

thesis defence, thesis defense (AE), viva voce (BE)

profound/in-depth knowledge of one's field

distinct and original contribution to the student's field of study

Board of Examiners

external examiners; reviewers (BE), referees (AE)

to defend one's thesis before a Board of Examiners

PhD/Doctoral degree, Doctorate

to get/obtain/receive/be awarded a degree

the university awards PhD degrees

to confer a PhD degree on a student

Research

fundamental/basic research

applied research

hard sciences, soft sciences, engineering sciences

interdisciplinary research

contract(ual) research

postdoctoral/postdoc research, postdoctoral student/postdoc

fellowship; fellow

apply for a grant, submit a grant proposal

grant application; the grant application was approved/rejected

personal statement; research proposal

research topic

to do/carry out/perform/conduct research into/on ...

to do a research project on ...
 collaboration on, to collaborate on (a project), with (a research institute)
 pilot project
 project leader/manager
 to keep up to date with international research developments
 state-of-the-art/leading-edge (technologies, methods)
 Czech Science Foundation

Presentations and publications

to give a paper on ... (at an international conference)
 to present a poster
 to publish a paper in a journal
 (peer-)reviewed journals (BE), refereed journals (AE)
 reviewer (BE), referee (AE)
 high-impact journal
 journal impact factor
 journal citation reports (JCR)
 citation index

EXERCISES

I. Match the word(s) given below with the definitions in the table.

contract(ual)	impact factor (of an academic journal)	applied
fundamental/basic	transcript	hard sciences
poster	research proposal	co-supervisor
joint degree	(peer-)reviewed/refereed	soft sciences
personal statement	state-of-the-art/leading-edge	viva voce
	citation index	

1. description of your proposed research	
2. brief explanation of why you want to pursue research at a university/research institute	
3. study programme developed and recognized by two (sometimes several and even foreign) institutions; students spend some time at each institution and receive either two national degrees or one degree recognized by both institutions	
4. supervisor who supervises a student jointly with another supervisor	
5. thesis defence in the UK	
6. research carried out to discover new facts or test new ideas without immediate commercial effect	
7. based on the latest scientific findings, this research seeks solutions to practical problems	
8. research based on an agreement between a university/research institute and a company,	

seeking to meet the needs of that company and paid for by that company	
9. natural and physical sciences, in which hypotheses are rigorously tested through observation and experimentation	
10. sciences dealing with human behaviour and institutions, in which strictly measurable data are difficult to obtain	
11. a large printed document containing a description of someone's research (usually with a number of graphs, figures and brief explanatory text) for presentation at a conference	
12. journals reviewed by experts who inform the editor if the paper should be published or not, or if any changes should be made before the publication	
13. the average number of times papers from that journal published in the past two years have been cited in the JCR year	
14. a kind of database enabling the user to find which later documents cite which earlier documents	
15. list of all examinations taken and their results	
16. most modern and advanced (machines, systems)	

II. Read the following lists of verbs.

a)

participate in	apply for	take	work on
enrol on/for	submit	conduct	get
attend	receive	carry out	perform
teach	pass	give	go to
be awarded	study for	gain	drop out of
miss	make	review	present
approve	obtain	listen to	hold
reject	defend	register for	organize
take place	collaborate on	get	write
have	run	do	deliver
skip	fail		

Which of them go with

1. PhD thesis	
2. research	
3. application	
4. project	
5. grant	
6. progress	
7. course student	

	teacher	
8. lecture	student teacher	
9. degree		
10. conference, workshop		
11. experience		

b)

perform
run
create

carry out
do
implement

build
develop
have

make
conduct

Which of them go with

1. plans	
2. analyses	
3. measurements	
4. models	
5. simulations	
6. experiments	
7. changes/modifications	

III. Fill with prepositions.

1. to have a PhD degree Physics
2. to study a degree
3. to be a PhD course
4. to work the guidance of
5. to lecture an interesting topic
6. to receive training research methods
7. to participate a conference
8. they met a conference
9. to do research digital signal processing
10. to do a project brain-machine interfaces
11. to work an international project
12. to apply a grant
13. to defend one's thesis a board of examiners
14. to find a solution a difficult problem.

IV. What's wrong with:

We are doing/working on a grant?

.....

V. Below you will find guidelines for writing a PhD Progress Report. Read them carefully and then write your own progress report (1 - 1.5 pages); use full sentences, not just lists of activities.

Progress Report

Name

Affiliation (faculty, department)

Admission to the PhD course (date)

Type of course taken (full-time, part-time)

Research topic

Supervisor

Reported period (from ... to)

Programme of the reported period:

Study and teaching requirements

Courses taken (full name of course, from ... to, date of examination, result, reasons for choosing the course, content of the course, name of lecturer, assessment of the course and its relevance to the chosen research topic)

Courses taught (full name, from ... to, designed for..., number of students, experience you gained; if not involved in teaching, why)

Co-Supervision of Bachelor's theses (topics, number of students, your involvement, problems encountered, experience gained, assessment of the experience)

Research

(objective, background, key points, reference to the plan, redefinition of the topic and/or its objective – if applicable, the theoretical background you gained – e.g. through literature study; chosen/developed methodology; experiments/measurements/modelling/simulations/calculations carried out (where relevant), programs prepared, constraints/problems and the way you faced them, detailed description of facilities (if relevant), cooperation with

Meetings with the supervisor/supervisors (regular/ad hoc, their help)

Study visits

(participation in conferences, seminars, workshops, summer/winter schools; study stays abroad; outcome of such activities, evaluation of their significance for your research)

Papers, presentations

(titles and dates of papers/posters given at conferences, seminars, in your department; response to them; papers published in journals)

Summary

(self-assessment of your progress for the given period; plans for the next stage)

VI. Use the information given below to present the Ph.D. study programme at your Faculty.

1. Admission requirements:

- completion of a Master study programme
- recommendation by the Admissions Committee (based on the evaluation of the applicant's achievements)

2. Fields of study (as appropriate, e.g.):	- approval by the Dean Electric Power Engineering Electrical Engineering Electronics
3. Duration of study:	4 years
4. Forms of study:	full-time, part-time/distance
5. Role of the supervisor:	- to propose the topic of the thesis - to design, together with the student, his/her individual study plan - to provide specialist and organizational guidance - to monitor fulfilment of the plan
6. Study plan content:	- study activities (oral exams, written reports) - participation in conferences - general idea of the scientific research forming the basis of the thesis - potential study stays, practical training at other institutions, preferably abroad - deadlines for the first reviewed publication, state doctoral examination and thesis defence
7. 1st stage of doctoral study:	- duration: usually two years (depending on the individual study plan) - the student <ul style="list-style-type: none"> - takes the prescribed examinations - works on the assigned research topic
8. Annual progress report:	- summarizes the student's progress and fulfilment of his/her study plan - is a basis for discussion with the supervisor
9. State doctoral examination:	- concludes the 1 st stage - the student <ul style="list-style-type: none"> - demonstrates his/her profound knowledge of the given field, including the knowledge of the basic methods of scientific research, the ability to acquire new scientific knowledge, to evaluate it in a creative manner - defends an outline of the basic propositions to be covered by the thesis (research proposal)

10. 2nd stage:

focus is on writing the thesis, publication of papers, presentations at conferences

11. Doctoral thesis:

- demonstrates the student's ability to work independently and creatively in a scientific field
- must contain original results of scientific research
- parts of the thesis:
 - outline of the state of the art in the given field
 - objectives of the thesis
 - description of the actual solution
 - original results and their exploitation in reviewed publications, projects, etc.
 - evaluation of the results from the point of view of the given field of study or their practical application

12. Defence of the thesis:

- the defence is open to all those specializing in the given or related field
- parts of the defence:
 - the student gives a brief presentation on his/her results
 - the reviewers' reports are read out
 - a discussion follows

13. Degree:

Ph.D. (Doctor of Philosophy)

VII. Topics for discussion

1. Why did you enrol on a PhD course?

2. Does your PhD study programme meet your expectations? If so, say why. If not, give reasons and suggest changes.

3. Some PhD students complain that they are overworked and underpaid. Is it true? What is the situation in your case? Is it a good idea to have a job alongside PhD study?

