

University of Novi Sad - Faculty of Agriculture



Aleksandra Konjević and Dušan Petrić



Harmonization and Innovation in PhD Study Programs for Plant Health in Sustainable Agriculture –HarISA is a Erasmus+ project funded with the support of the European Union. Project Number: 598444-EPP-1-2018-1-HR-EPPKA2-CBHE-JP (2018-2472 / 001-001)

University of Novi Sad

- ❖ Founded in 1960
- ❖ Second largest university in Serbia

- Novi Sad - European Capital of Culture 2021
- **Novi Sad - European Youth Capital 2019**
- 50,000 students and 5,000 staff
- Comprehensive university providing nearly all fields of science and higher education
- The University offers around 350 accredited study programs at the level of Bachelor, Master, Specialist and **PhD studies**, carried out at its Faculties and within its Centers for Interdisciplinary and Multidisciplinary Studies



ΓΕΩΠΟΝΙΚΟ ΠΑΝΕΠΙΣΤΗΜΙΟ ΑΘΗΝΩΝ



•UNS is comprehensive university -
variety of undergraduate &
postgraduate study programs, 14
Faculties (9 in Novi Sad)

- F. of Philosophy
- F. of Agriculture
- F. of Law
- F. of Technology
- F. of Technical Sciences,
- F. of Medicine
- F. of Sciences
- Academy of Arts
- F. of Sport and Physical Education

- F. of Economics in Subotica
- F. of Civil Engineering, Subotica
- Teachers' Training Faculty in
Hungarian
- "Mihajlo Pupin" Technical F.,
Zrenjanin
- F. of Education, Sombor

Faculty of Agriculture

- The oldest faculty within the University - founded in 1954

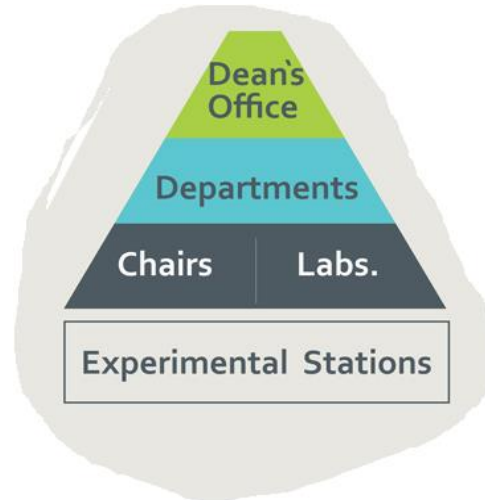


+ 3 000



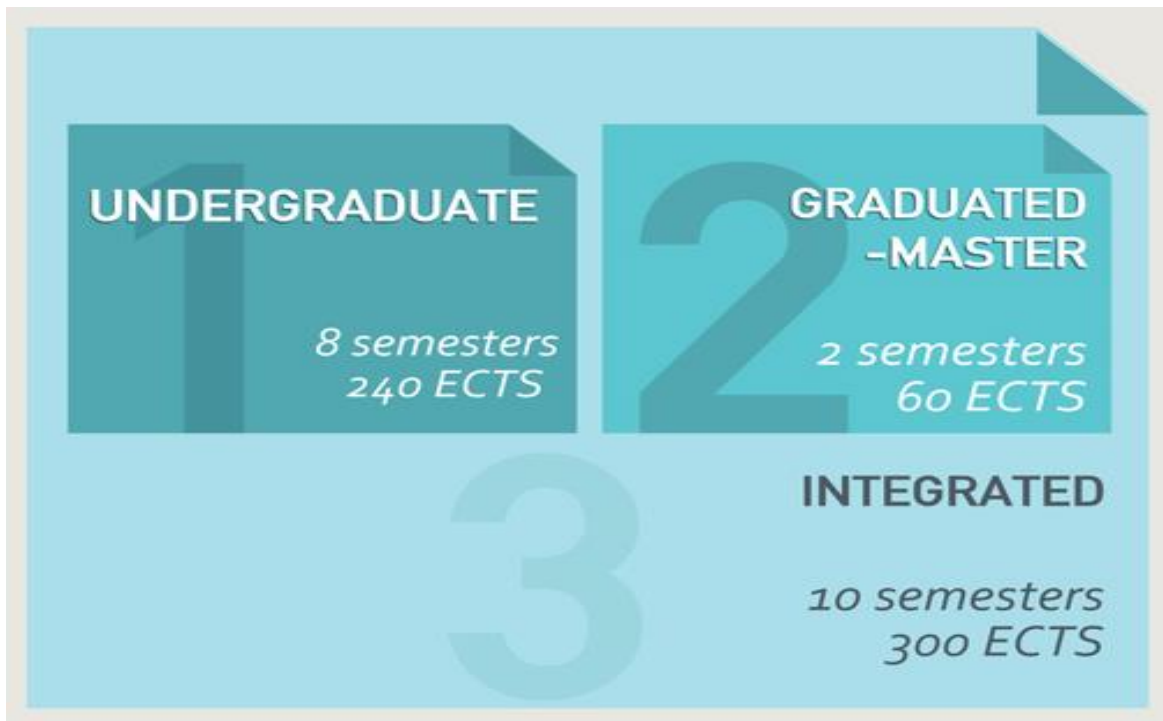
+ 200 + 150

- Graduated student + 9 500
- MSc +1500
- Vet. Med. +480
- PhD +900



Faculty of Agriculture

The academic studies are organised on three levels: 4+1+3





1) Undergraduate Academic Studies (13): four years, 8 semesters, 240 ECTS

- Field and Vegetable Crops
- Organic Agriculture
- Fruit Science and Viticulture
- Horticulture
- Landscape Architecture
- Phytomedicine
- Agricultural Ecology and Environmental Protection
- Animal Science
- Agricultural Engineering
- Water Management
- Agricultural Economics
- Agrotourism and Rural Development
- Forestry





2) Graduate Studies - Master Studies (16)

- Field Plant Growing
- Soil and Plant
- Genetics, Plant Breeding and Seed Science
- Organic Agriculture
- Animal Science
- Fruit and Vine Growing
- **Phytomedicine** (five modules: 1. Phytopharmacy, 2. Entomology, 3. Phytopathology, 4. Herbology, 5. Agricultural, Veterinary and Medicinal Zoology)
- Water Management
- Agricultural Engineering
- Agricultural Economics
- Horticulture
- Agricultural Water Management
- Agricultural Extension Service
- Landscape Architecture
- Biotechnology Management



3. Integrated Academic Studies - Veterinary Medicine

4. Doctoral Studies (3)

- Agronomy (including Plant Health)
- Agricultural Economics
- Veterinary Medicine



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PhD Study Agronomy, *in compliance of higher educational system with the Bologna process*

No.	Course name	Semester	Status	Active teaching hours/week	Students preparatory work hours/week	ECTS
The first year						
1	Academic skills	1	obligatory	3	1	5
2	Biostatistics	1	obligatory	4	5	10
1	Course 1	1	elective	4	6	10
2	Course 2	2	elective	4	6	10
3	Course 3	2	elective	4	6	10
	Research work	2	obligatory	n.a.	n.a.	15
Total first year				19	24	60

No.	Course name	Semester	Status	Active teaching hours/week	Students preparatory work hours/week	ECTS
The second year						
4	Course 4	3	elective	4	6	10
5	Course 5	3	elective	4	6	10
	Research work	2	obligatory	n.a.	n.a.	15
	The first manuscript published	3	obligatory	n.a.	n.a.	5
6	Course 6	4	elective	4	6	10
	Research work	4	obligatory	n.a.	10	5
	The second manuscript published	4	obligatory	n.a.	n.a.	5
Total second year				12	28	60
The third year						
	Research work	5	obligatory	n.a.	20	5
	Research work	5	obligatory	n.a.	n.a.	20
	The third manuscript published	5	obligatory	n.a.	n.a.	5
	Research work	6	obligatory	n.a.	20	10
	Viva	6	obligatory	n.a.	n.a.	20
Total second year				n.a.	40	60
Total year 1+2+3				31	92	180



PhD Agronomy and Veterinary medicine *compulsory courses*



Compulsory course name	Course outcomes
Academic skills	To know how to look for good quality in research and to recognise when you have found it
	To recognise what makes a well-designed research experiment.
	To understand the importance of identifying all the factors influencing experiments.
	To appreciate the need to consider different methods for processing and analysing experimental results.
	To acquire skills to develop arguments and ideas and present them in a logical manner.
	To be able to construct a good quality scientific manuscript for publication in English.
	To acquire and demonstrate skills in presenting scientific research to others at meetings.
	To know the criteria needed to write successful project proposals.
	To acquire basic skills for self-management, management of others and career management.
	To appreciate the qualities needed for effective supervision and mentoring of research students and staff.
	To improve ability to communicate in English!
Biostatistics	The doctoral students should be able to use statistical instruments and apply them adequately. The acquired skills can be used for successful solving of problems in their scientific research and further professional work.



ΓΕΩΠΟΝΙΚΟ ΠΑΝΕΠΙΣΤΗΜΙΟ ΑΘΗΝΩΝ





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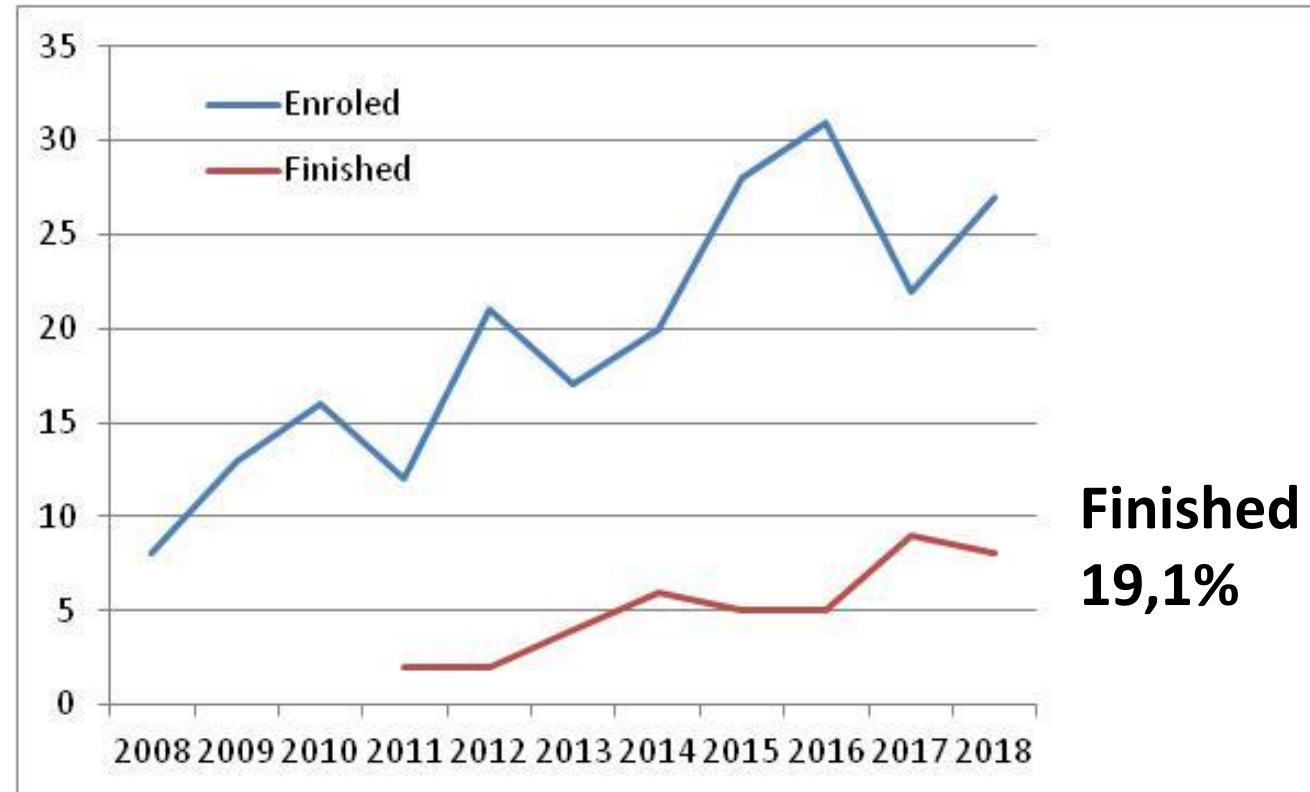
PhD Study Agronomy, *elective courses in Plant Health*

Elective course name					
Entomology	Pesticide science	Phytopatology	Weed science	Zoology	Interdisciplinary
Techniques of Insect Identification	Chemical methods for pesticide residues analysis	Diagnosis of plant pathogenic fungi and fungi-like organisms	Advanced herbology 1	Special zoology	Integrated Pest Management
Monitoring of Insects	Advanced phytopharmacy 1	Diagnosis of plant pathogenic viruses	Advanced herbology 2	Special parasitology	Methods and machines of pesticide application in plant protection
Parameters of Insect Populations	Advanced phytopharmacy 2	Plant disease resistance			
Advanced entomology 1	Biological methods for pesticides residues analyses	Detection and Identification of Phytopathogenic Bacteria			
Advanced entomology 2					
Neglected vector species and pathogens					



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Number of Agronomy PhD students enrolled/finished 2008-2018

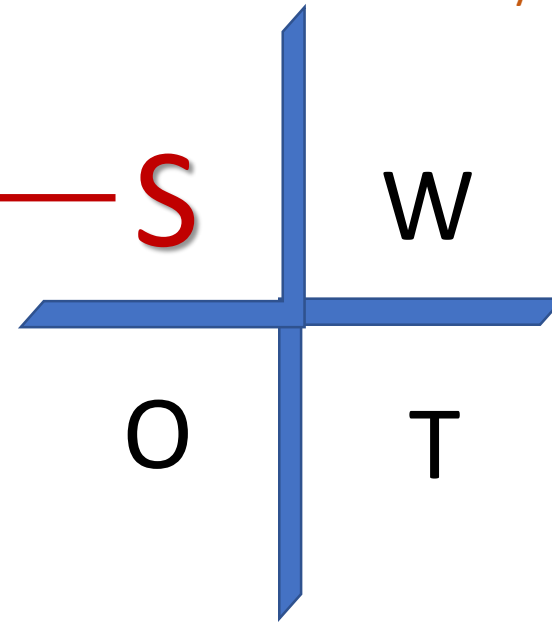


**Finished : enrolled ratio
19,1%**



Strengths

- ✓ High scientific production of staff
- ✓ Ability to transfer new knowledge to different stakeholders
- ✓ Multidisciplinary expertise in the field of biotechnology, including plant health
- ✓ Participation/coordination in many international (TEMPUS, ERASMUS, FP7, HORIZON 2020) and national projects

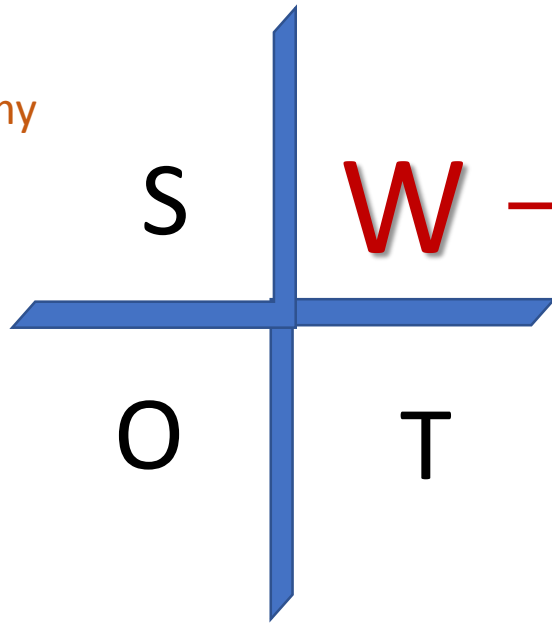


PhD Study Agronomy





PhD Study Agronomy

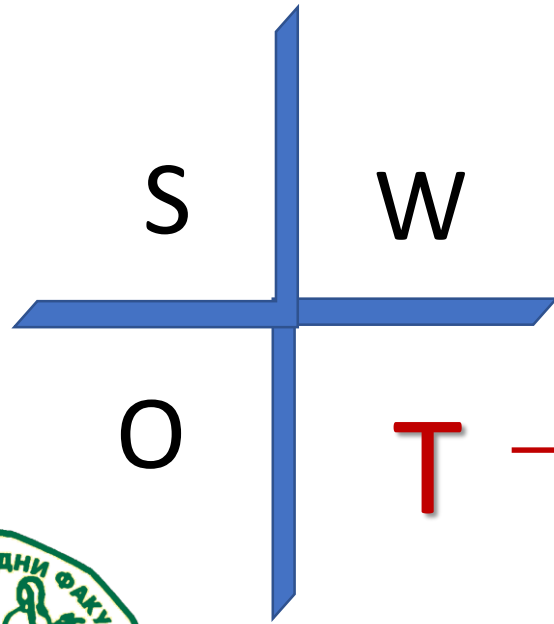


Weaknesses

- Weak enrollment requirements
- Quality of students lost in ECTS
- Lack of funding for PhD research projects/training
- Not strong enough nor strategic collaboration between academia and economy
- Lack of modern equipment due to insufficient funding
- Low chances for employment of the young scientists
- Lack of national evaluation scheme for teachers

-





Threats

- ✓ Low motivation to finish the PhD studies
- ✓ Founders are expecting decrease of costs – lower financing
- ✓ Research work not coordinated with country research priorities/ economy/ agriculture/ market needs
- ✓ Funding for the PhD research projects might be even more difficult to find in the future
- ✓ Weak capacities in strategic planning
- ✓ Continuous brain drain



PhD Study Agronomy

List of completed PhD thesis:

1. The Owlet Moths (Noctuidae, Lepidoptera) Fauna of Vojvodina and Parameters for Forecasting Abundance
2. Faunistic research of true bugs (Heteroptera) in different ecosystems and molecular analyze of certain species
3. Residues of atrazine and its metabolites in the groundwater of Serbia
4. Mikosis of medicinal plants in Serbia
5. Soil weed seed banks in vineyards established by intensive and extensive cultivation methods
6. Allelopathic influence of *Abutilon theophrasti* Med. and *Xanthium strumarium* L. extracts on soya and corn crops

List of completed PhD thesis:

1. Influence of Mass Rearing Conditions on the Wing Length Selection in Mosquito Species *Stegomyia albopicta* (Diptera: Culicidae) and Effects of Sterile Male Release Method Application
2. Diversity and Distribution of Sand Flies (Diptera, Phlebotominae)''
3. Identification of *Alternaria* spp. on spelta grains and influence of yield, micotoxine content and quality
4. Effects of insecticides on the mortality and physiological stress of European Corn Borer larvae (*Ostrinia nubilalis* Hbn.) and the occurrence of secondary fungal infections in maize
5. Phytochemical analysis and antioxidant capacity of sweet cherry fruits infected with *Monilinia laxa* Aderh. and Ruhl.
6. Biological efficacy evaluation of larvicide formulations in mosquito (Diptera, Culicidae) control





- To know how to look for good quality in research and to recognise when you have found it
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- To understand the importance of identifying all the factors influencing experiments.
- To appreciate the need to consider different methods for processing and analysing experimental results.
- To acquire skills to develop arguments and ideas and present them in a logical manner.
- To be able to construct a good quality scientific manuscript for publication in English.
- To acquire and demonstrate skills in presenting scientific research to others at meetings.
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- To improve ability to communicate in English!



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The **essential purpose** of a research degree programme is a **period of training in research** and the generation of an original piece of work.

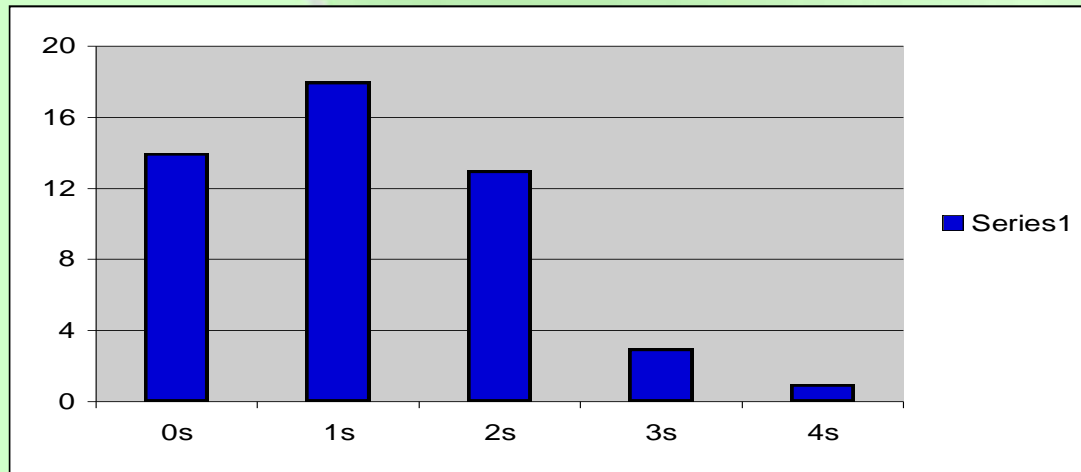
To develop skills which will improve students effectiveness as a **researcher** but also develop their **personal, professional** and **career management** skills.

Our approach to training is to emphasise that **one size does not fit all**. The SAgE Faculty has a **diverse student body** and their training needs differ. Students are expected to undertake an assessment of their training and development needs at the start ...



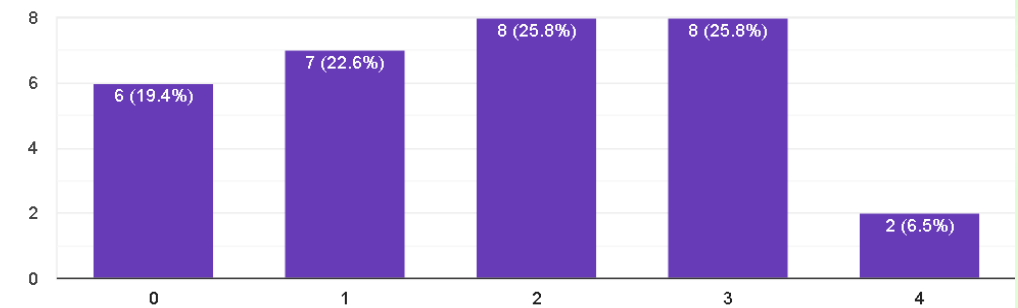
BFBG13 - C1. I manage projects effectively by setting research goals, intermediate milestones and prioritising activities.

PFNS18- C1. I manage projects effectively by setting research goals, intermediate milestones and prioritising activities.



3. I manage projects effectively by setting research goals, intermediate milestones and prioritising activities.

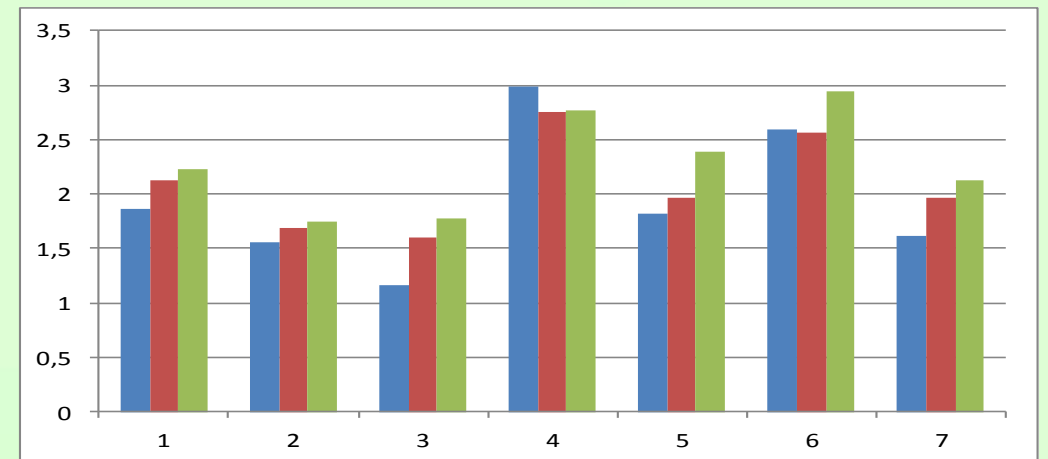
31 responses



5 of you gave yourselves at least one score of 0.

Here is a comparison of skill self-assessment scores at the start of the course in **BFBG13**, **PFNS17** and **PFNS18**.

Blue – BFBG13
Red – PFNS17
Green – PFNS18





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Faculty of
**Science, Agriculture
& Engineering**

Degree	Study Type	Stage	Max School Credits as part of total	PGRDP Credits Required
PhD	Full Time	1	20	60
PhD	Full Time	2	20	40
PhD	Full Time	3	0	0
PhD	Part Time	1	10	30
PhD	Part Time	2	10	30
PhD	Part Time	3	10	20
PhD	Part Time	4	10	20
PhD	Part Time	5	0	0
PhD	Part Time	6	0	0



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2018/19 Workshop Programme

Faculty of
**Science, Agriculture
& Engineering**

**Newcastle
University**



Start Date	Start Time	Length	Title	Location
13/11/2018	10:00	2 hours	D3: Write Here Write Now	Robinson Library: Tees Cluster 1.60
13/11/2018	10:00	2 hours	A1: Referencing and EndNote	Robinson Library: Academic Skills Room
13/11/2018	13:00	3 hours	D3: Introduction to Innovative Behaviours	Devonshire Building: G.21/22
14/11/2018	10:00	3 hours	C2: Writing Your Research Project Proposal	Devonshire Building: G.21/22
19/11/2018	14:00	2 hours	B2: Time Management	T10, (3.12), Third Floor, Stephenson Building
19/11/2018	13:00	1 hour	B3: Understanding the Doctorate (Visa) Extension Scheme	King's Gate L1.20
21/11/2018	09:15	1 day	D2: Scientific Writing	Cassie Building: 3.25
26/11/2018	09:15	1 day	A2: Programming with R	Chart PC Cluster (3.30), Barbara Strang Teaching Centre
26/11/2018	09:30	3 hours	C2: Preparing For Your Viva	Devonshire Building: G21/22
26/11/2018	13:30	3 hours	D1: Influencing and Negotiating	Devonshire Building: G21/22



ΓΕΩΠΟΝΙΚΟ ΠΑΝΕΠΙΣΤΗΜΙΟ ΑΘΗΝΩΝ





In making a booking students are:

- Committing yourself to attend the course or workshop for its full duration
- Agreeing to arrive on time for the course
- Indicating that you will participate in activities taking place as part of the course
- Agreeing to undertake any pre-requisite activities as requested
- Expected to stay for the whole workshop



2018/19 Activities

Faculty of
**Science, Agriculture
& Engineering**

**Newcastle
University**

Activity

PGRDP Credits

3MT Competition

10

The Three Minute Thesis (3MT) competition asks doctoral students to explain their research in just three minutes using only one slide. The explanation should be easily understood by a non-specialist. Originally developed by the University of Queensland, Australia it has been taken up by Universities across the world. The competition offers training then the opportunity to compete in a University final in front of the public. The winner will then go forward to compete in the national competition.

3MT Competition Launch <https://workshops.ncl.ac.uk/view/book/modal/41097/>

ACTION for Impact

20

ACTION for Impact is a collaborative innovation and enterprise programme for postgraduate and early-career researchers at Newcastle University aimed at creating impact of all kinds from research. ACTION for Impact focuses on the development of entrepreneurial researchers who are aware of the relevant problems and challenges they are addressing, and are capable of realising the commercial, economic and societal impact of their research.

For further information register for the Action for Showcase on the 17th October 2018
<https://forms.ncl.ac.uk/view.php?id=2778741>

2018/19 Activities

Bright Club

Variable

Want to perfect your presentation skills or to engage new and exciting audiences? This opportunity is for you! Bright Club is the thinking person's comedy night! It is the platform which transforms researchers / lab technicians / academics from Universities around the North East into stand- up comedians – making the perfectly normal rituals of your work, research or daily life into a comedic set. All training will take place at the International Centre for Life and will give you an overview on public engagement skills applied to comedy. If you decide to brave the stage and perform you will be offered further opportunities to rehearse and fine tune your performance. The night will be hosted at The Stand by a professional compare. You won't be going in alone!

Bright Club training sessions will be advertised via the booking system. Next date 18th October <https://workshops.ncl.ac.uk/view/book/modal/41266/> Email brightclub@life.org.uk for further information.



Brilliant Club

20

The Brilliant Club is an award winning charity that recruits, trains and places doctoral researchers into state schools to deliver programmes of university-style tutorials to small groups of high performing pupils. Placements offer researchers the chance to complete meaningful and well-paid work, whilst communicating their research and gaining teaching experience. As well as gaining teaching experience, you will deepen your knowledge of the UK education system, helping you understand the backgrounds of the undergraduates studying at your institution.

Next briefing session <https://workshops.ncl.ac.uk/view/book/modal/41012/>





This list of activities has been agreed by the Graduate School Committee for the entire Faculty of Science, Agriculture and Engineering.

- **Conference** (National/ International) poster presentation (5)
- **Conference** (National/ International) oral presentation (10)
- In-sessional English (5)
- Journal Club/ Seminar Series Attendance (5)
- Journal Club/ Seminar Presentation (5)
- Journal Club/ Seminar Organisation (10)
- Masters Module Attendance (10)
- PG Student Rep School/Faculty (5)
- **Publication** (5)
- School Conference Poster Presentation (5)
- School Conference Oral Presentation (5)
- School Conference Organisation (10)
- **Teaching/ Tutorial/ Demonstrating** - 6 hours minimum (5)

**Each activity can be only
be awarded PGRDP credits
once during your research
degree.**





ePortfolio:

- Provides a record of your personal development at Newcastle University.
- Helps you plan and reflect upon your research.
- Identifies areas of strength and where you need more support or training.
- **Full documentary record for the approval process** of your research project.
- Full documentary record for the **annual progression process** each academic year.
- Enablement and recording of the **formal student/supervisor monthly engagements**.



