

Aims of a doctoral degree

**CHEM-L1000 Toolkit for Doctoral
Studies**

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The thesis in practice.....

- *NEW scientific findings* - new scientific understanding
- Time: 4 years
- In practice 3-4 articles (Start to write as early as possible)
- (Monograph is an alternative)
- Papers can be shared
- Clear description of contributions for each paper!
- Conference papers – non peer-review, not included
- Reviews not allowed
- *Responsible conduct in research*
- *40 credits of courses*

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The “summary” part of the thesis

- To put the work in context
- Important for the review
- *Demonstration of your maturity as a scientist*
- Your text, your view of the findings of the work – your contribution
- Concise

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What does a doctoral degree mean?

- The doctoral degree is the highest educational degree awarded.
 - But it is also a job...
- Basic education for research
- What is the content of the education?
 - Doing science
 - Experimental work, techniques
 - Communication (publications, presentations)
 - Responsible conduct



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Discussion: Pros and cons

- Why get a doctoral degree advantages? - drawbacks? –

Tutkija (tohtori), palkka

Keskimääräinen kuukausipalkka tehtävänimikkeelle tutkija (tohtori) on **4325 euroa kuukaudessa**. Katso myös eri ammattien keskimääräiset palkat sekä suurimmat ja pienimmät palkat alta.

Palkkaverot ja palkkalisät on muutoin tyhjiä, kun hakua tehdään eri ammattien palkat. Katso lisätiedot palkkaverot ja etuusvapauspalkat.

Herkänneuvostot: Päättökoulu Toimika Työpaikka

Keskivertopalkka
4325 €

A 32 HELSINGIN SANOMAT PERJANTAINA 30.9.2016

TALOUS

Työ

Tulot koulutuksen mukaan

euroa kuukaudessa
0 1000 2000 3000 4000 5000

Perustaste	
Keskiaste	
Kalkki palkansaajat	
Alin korkeaste	
Alempi korkeakouluaste	
Ylempi korkeakouluaste	
Tutkijakouluaste	
AMMATTILOINNA / HIG: Osoite: Täsmäntä	

	Median age	Median salary, €	Mean, €	Change of median salary, %
All respondents	41	4 780	5 219 ± 45	0,2
Master of Science in Technology	40	4 799	5 247 ± 52	0,2
Architects	44	4 320	4 378 ± 123	0,4
MSc in natural sciences	42	4 450	4 711 ± 137	-0,8
Licentiate or doctoral degree	46	5 220	5 641 ± 137	0,4

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Pros and cons

- Overqualified, to narrow
- Stressful personal relations
- Lots of work
- Low salary
- Writing and reading is stressful
- Long term commitment
- Interesting variation, flexible
- Travel, networking
- Delayed payback
- Independent, Interesting
- Interesting jobs in the future,
- Working for yourself
- Valuable work content for itself

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Top skills on the job market

- How to use the degree as leverage for you next job?
- Think critically
- Communicate clearly, language skills
- Solve complex problems
- Network, collaborative, teamwork, socially competent
- Ethical values

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Transferable skills

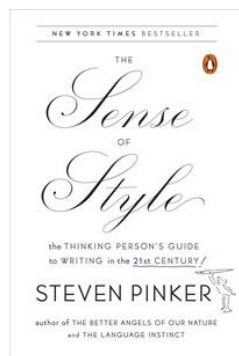
- Communication – toolkit seminar - group meetings, conferences, workshops
- Language – are you able to write an article from start to finish? Writing courses –
- Teamwork
- *CHEM-E2165 - Computer Aided Visualization and Scientific Presentation*
- *Writing and communication courses.*

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Learn to write!

- Take opportunities to train written communication
- Lecture on writing
- ACS Style Guide

The Sense of Style: The Thinking Person's Guide to Writing in the 21st Century Steven Pinker



<https://pubs.acs.org/doi/book/10.1021/acsguide>

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Advisory board!

- Remember to arrange and to organize advisory board meetings

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