The professional profile of PhD-holders

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Core business

PHASE 1 **Skill development**

For example, by reading articles I get a good sense of what methods to use, and I took a autumn school which taught the foundations of artificial intelligence which enabled me to apply the skills and knowledge for my PhD project.

PHASE 1 **Evaluation**

I have actively participated in collaborative meetings and summer schools, enhancing my skills and understanding. I regularly meet with my supervisor to discuss progress and challenges. Engaging in scientific discussions has further sharpened my critical thinking and analytical abilities.

PHASE 1 **Information management**

Developed through literature reviews for thesis work, use of databases like ADS and arXiv, organizing sources with Zotero, and managing simulation data storage securely during research projects.

PHASE 1 **Expertise and methods**

Through my academic path in astrophysics—from bachelor's to PhD—I've built a strong foundation in the theoretical and historical background of the field. I stay current with advancements by following key journals, attending international conferences, and engaging with global collaborations. During my research, I apply relevant statistical tools and numerical methods, justifying their use depending on the dataset and objective. Formulating hypotheses is part of my everyday research process, and I regularly defend my work in meetings, seminars and collaborations, using structured presentations supported by rigorous data analysis.

Personal and relational qualities

PHASE 1 **Communication**

Presented at meetings, taught undergrads, wrote/writing papers, used LaTeX and slides, shared research online, and communicated in English and Swedish across academic settings.

PHASE 1 **Collaboration**

Collaborated on multi-institution projects, attended/attending conferences, workshops, summer schools, meetings to build networks, discussed joint goals in research partnerships.

PHASE 1 **Analysis, synthesis and critical thinking**

Learned through peer review, journal clubs, and research discussions; practiced summarizing results, comparing theories, adjusting views based on data, and maintaining critical objectivity.

PHASE 1 **Open-mindedness and creativity**

Worked with international teams, explored methods from other fields like machine learning, stayed curious, tested new models, and adapted to diverse research environments and perspectives.

PHASE 1 **Commitment**

Motivated by curiosity and discovery; stayed focused through setbacks like failed experiments; learned from errors, handled routine tasks, and leaned on peers for support and perspective.

PHASE 1 **Integrity**

Followed data ethics in all research, cited sources properly, respected IP and confidentiality rules, honored deadlines, and disclosed potential conflicts during collaborations or publications.

PHASE 1 **Balance**

I recognize my strengths and limits, seek feedback from mentors, communicate clearly, manage work-life balance, and use stress-relief methods like exercise, peer support, social interactions with peers outside of work.

PHASE 1 **Listening and empathy**

Developed by working in diverse teams, actively listening in meetings, adapting communication to different expertise levels, respecting cultural differences in collaborations, social interactions etc.

PHASE 1 **Negotiation**

Learned through social interactions, collaborative projects, listening closely to colleagues' concerns, balancing goals and constraints, and facilitating consensus in group decisions during research and teamwork.

Business management and value creation

PHASE 1 **Project management**

Managed research projects by setting clear goals, timelines, and quality standards; wrote project plans; adapted to issues; and regularly reviewed progress with supervisors.

PHASE 1 **Managing change**

Adapted project plans when new data or tools emerged, listening/paying attention to how other peers deal with similar issues and how I can learn from their decisions (mistakes or not), sought advice from supervisors, and embraced new methods to improve outcomes.

PHASE 1 **Decision-making**

Made data-driven choices during the project, prioritized tasks based on impact and importance, consulted advisors for major decisions, and reported progress to supervisors to guide project direction.

PHASE 1 **Obtaining and managing funding**

Applied to and received travel grants and funding for conferences, reducing / combining with other means of funding (e.g. from supervisors)

PHASE 1 **Producing results**

> Turned research questions into experiments, quickly tested hypotheses, incorporated feedback from collaborators, published findings following institutional guidelines

PHASE 1 **Intellectual and industrial property**

> Learned through research seminars and institutional training on IP and copyright, research integrity, discussions with professors, supervisors, peers, and followed data-sharing rules in collaborations.

Strategy and Leadership

PHASE 1 **Strategy**