

# Competency Development Guide

## What's the purpose of the Competency Development Guide?

To help PhD candidates and their supervisors to review their competences and performance:

1. Define which competences require attention
2. Discuss with you supervisor and assess your current performance level
3. Define competency development actions.

LEVEL 3

LEVEL 2

LEVEL 1

RESEARCH SKILLS				TRANSFERABLE SKILLS				DISCIPLINE RELATED SKILLS		
Research Management	Academic Thinking	Academic Attitude	Research Data Management	Effective Communication	Teaching, Supervising & Coaching	Working with Others	Self-Management & Autonomy	Design	Engineering	Scientific Knowledge & Skills
Formulates and designs the research strategy including planning and carrying out of the project and evaluation/ validation without supervision.	Consistently evaluates the value of a statement or a fact, to question matters and to make clear reasoned judgements.  Is able to actively and creatively look for improvement without support from supervisor.	Consistently makes choices that reflect integrity and responsible behaviour. Within the TU Delft, scientific integrity implies that the researcher commits to the principles of conduct stated within the <i>TU Delft scientific code of ethics</i> .	Follows and systematically updates the Data Management Plan as part of the regular research activities and suggests improvements to the management of research data/software within the project.  Employs efficient workflows and relevant tools to manage the research data/software ensuring their reproducibility, reusability and transparency.  Produces and publishes reproducible research data/software whenever possible following institutional, ethical and legal requirements	Regularly delivers ideas and opinions to diverse audiences.  Regularly prepares and gives clear and fluent presentations in a confident manner.  Inspiring and succinct communications targeted for the audience.  Fluent ability in English language (reading, writing and speaking).  Experienced in a variety of formal presentation settings, both inside and outside of the university (including international conferences).	An experienced teacher who is able to inspire students to develop knowledge and skills.  Designs curriculum and/or teaches different courses.  Experience of participating in DE group coaching activities.  Ideally completed DE courses on teaching and applied within a teaching assistance role.	Works well with academic staff, peers and supervisor; sets a tone of cooperation within the work group and across groups; coordinates own work with others; values working relationships; when appropriate facilitates discussion before decisionmaking process is complete.  Builds and retains formal and informal relationships naturally, thus creating a network of contacts with people who are (or could be) interesting or useful for progressing research or finding the next career step.  Maintains multi-research collaborations.	Manages time effectively and maintains a healthy work-life balance with an assertive, creative and confident attitude as well as being able to deal with change, stress and procrastination.  Able to be independent in one's own thoughts and actions and willing to take responsibility.	Consistently demonstrates the ability to acquire and internalise the design skills to execute the PhD project.	Consistently demonstrates the ability to acquire and internalise the engineering skills to execute the PhD project.	Consistently demonstrates the breadth and depth of knowledge required in the field of doctoral research.
Formulates and designs research strategy including the planning and carrying out of the project and evaluation/validation with regular supervision.	Evaluates a statement or a fact. Requires limited support from supervisor to actively and creatively look for improvement.	Is aware of principles of conduct stated within the <i>TU Delft scientific code of ethics</i> and demonstrates good choices that reflects integrity and responsible behaviour.  Receives no negative feedback from scientific community.	Follows and regularly updates the Data Management Plan and employs best-practices for research data/software management with guidance from the supervisor, when needed.  Is familiar with tools that facilitate the implementation of best-practices on research data/software management.	Delivers ideas and opinions to a limited audience. Prepares and gives clear and fluent presentations in a confident manner.  English language skills requires some correction.  Clear and succinct communications targeted for the audience.	Requires minimum guidance when teaching.  Experience of supervising and coaching Master students.  Experience of reviewing assignments.  Ideally completed the DE course on coaching of individual students and project groups.	Works well with academic staff, peers and supervisor and requires minimum supervision.  Understands the importance of networking; pays attention to building informal relationships. Proposes and initiates new collaborations.  Creates and maintains research collaborations.	Requires minimum guidance to manage time effectively and maintain a healthy worklife balance.  Positive evidence of dealing assertively, creatively and confidently with change.  Positive evidence of working autonomously and taking responsibility	Positive evidence of acquiring and internalizing the design skills to execute the PhD project with minimum guidance from supervisor.	Positive evidence of acquiring and internalizing the engineering skills to execute the PhD project with minimum guidance from supervisor.	Demonstrates the breadth and depth of knowledge required in the field of doctoral research with limited support from supervisor.  Is able to independently source relevant materials.
Executes projects in line with supervisor instructions.  Defines the research question and is able to scope and plan the project steps.  Completed one of the DE courses within the Research Management section.	Basic evaluation of a statement or a fact and limited skills in analysing and assessing them.  Requires support from supervisor to actively and creatively look for improvement.	Is aware of principles of conduct stated within the <i>TU Delft scientific code of ethics</i> and limited reflection on their integrity and behaviour.  Requires guidance from supervisor.	Is aware of the importance of well-managed research data/software and recognizes the regulations, policies and/or legal requirements associated with the research data/software produced (and/or collected) within the project.  Designs a Data Management Plan with guidance from the supervisor.	Limited experience of delivering ideas and opinions to an audience. Requires support from supervisor to prepare a clear and fluent presentations. Confidence requires development.  Reads English literature but English speaking ability is basic.  Confident presenting to small teams/peers in the university.  Communications require supervision.	Limited experience of teaching.  Delivers guest lectures.  Experience of supervising and coaching at Bachelor student level.	Requires guidance regarding working with academic staff, peers and supervisor.  Introspective approach to the scientific community.  Limited networking skills. No clear goal for building formal relationships.  Participates in pre-established collaborations.	Requires guidance to manage time effectively and maintain a healthy work-life balance. Skills in dealing assertively, creatively and confidently with change to be developed.  Needs to develop skills to work autonomously.	Requires regular supervision on the design skills to execute the PhD project.	Requires regular supervision on the engineering skills to execute the PhD project.	Basic breadth and depth of knowledge required in the field of doctoral research.  Relies on supervisor for transfer of knowledge.