

GENERIC COMPETENCES OF POLYTECHNIC GRADUATES

Background

The Participation of Finnish Universities of Applied Sciences in the European Higher Education Area <www.ncp.fi/ects> is a project initiated and financed by the Finnish Ministry of Education and implemented in 2004 – 2006. The aim of the project has been to promote the integration of Finnish polytechnics i.e. universities of applied sciences into the European Higher Education Area, to support the curriculum design at universities of higher education and to disseminate good practice pertaining to curriculum design. During the project national guidelines for subject-specific competences and non-specific, generic competences have been framed.

Subject-specific and generic competences

Competences are understood as wide-ranging combinations of know-how – composites of knowledge, skills and attitudes possessed by an individual. Competences illustrate the person's proficiency, capacity and ability to perform in professional tasks. Finnish universities of applied sciences have decided to use a distinction between programme-specific or subject-specific and generic competences. The objective has been to create competence categories that are clearly distinguishable and easy to evaluate as learning outcomes.

The subject-specific competences form a base for the student's development in his/her career and expertise. The generic competences are common to different degree programmes and subject fields, but they may have different emphases and vary in importance in different professions and vocational tasks. The generic competences lay a foundation for the person's participation and collaboration in working life as well as for his/her professional development. The desirable competences can be enhanced either through choosing appropriate educational contents or methods. The choice of contents is primarily done in line for subject-specific expertise. The development of generic competences often takes place while the student is acquiring special expertise. The solutions relating to pedagogy and learning environments play an important role in the development of generic competences required in working life.

The definitions of competences at universities of applied sciences

The subject-specific competences have been defined in programme-specific teams under the guidance of the chairpersons appointed by the Arene ry (i.e. the rectors' conference). The generic competences have been defined in a national team consisting of six representatives of polytechnic staff and one representative of SAMOK ry (The National Union of Finnish Polytechnic Students SAMOK). The outcome of team-work has been occasionally evaluated by professor Päivi Tynjälä from Jyväskylä University and professor Pekka Ruohotie from Tampere University. The background material for the definitions has been derived from the Polytechnic Decree, European and national competence descriptions, literature relating to competences and from studies and experiments conducted at Finnish universities of applied sciences. The definitions have been made in collaboration between teachers, students and representatives of working life.

The definitions and the results of collaborative work are more explicitly discussed on the homepage of the project at www.ncp.fi/ects.

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Generic Competences of Polytechnic Graduates

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Generic competences	Description of the competence, first-cycle graduates	Description of the competence, second-cycle graduates
Learning competence	<ul style="list-style-type: none"> ▪ is able to self-evaluate one's competences and define his/her development and learning needs ▪ recognises one's learning style orientation and is able to conduct studies independently and develop one's learning strategies ▪ is capable of collaborative learning and sharing knowledge in teams and working communities ▪ is able to operate in changing environments and to recognise and utilise available learning opportunities and scopes for action ▪ Is able to plan, organise and develop one's own actions 	<ul style="list-style-type: none"> ▪ is able to self-evaluate one's competences and expertise in a versatile and systematic way and to define one's development and learning needs ▪ is equipped for life-long learning and understands and self-directs one's learning process ▪ is able to study together and share one's learning and expertise in different expert teams and networks ▪ is able to work initiatives and to anticipate changes and needs for change ▪ is able to plan, organise and develop one's actions
Ethical competence	<ul style="list-style-type: none"> ▪ is able to apply the value systems and ethical principles of the subject field in one's conduct and tasks ▪ takes responsibility of one's own actions and works according to the jointly agreed principles and measures ▪ Is able to apply the principles of sustainable development in one's actions ▪ is able to take other people into account in one's actions 	<ul style="list-style-type: none"> ▪ is able to apply the value systems and ethical principles of the subject field in one's conduct and tasks as an expert and a developer of working life ▪ takes responsibility of one's own actions and works according to the jointly agreed principles and measures ▪ is able to apply the principles of sustainable development in one's actions and knows the social responsibility of one's organisation ▪ is able to cater for others in one's actions and make decisions considering an individual, community and a society at large
Communicative and social competence	<ul style="list-style-type: none"> ▪ is capable of listening to others and communicating in writing, speech and visually using different communicative styles ▪ is able to function in the communicative and interactive situations typical of the field ▪ understands the principles of group and teamwork and is able to work together with others in multidisciplinary teams ▪ is able to utilise information and communications technology at one's work 	<ul style="list-style-type: none"> ▪ is able to listen to others and communicate in writing, speech and visually with different target groups ▪ is able to manage in different communicative and interactive situations and to organise and create professional networks ▪ understands the principles of group and team work and is capable of working together in multidisciplinary teams also as a team-leader ▪ is able to utilise information and communications technology at one's work

Development competence	<ul style="list-style-type: none"> ▪ is able to retrieve and analyse information of one's subject field, to critically evaluate it and to perceive entities in a holistic way ▪ knows the basic principles and methods of research and development work and is able to conduct small-scale research and development projects applying the existing knowledge of the field ▪ knows the principles of project work and is able to work in projects ▪ adopts an initiative and proactive approach to work and is capable of problem solving and decision making at one's work ▪ understands the principles of profitable and customer-focused operations and possesses entrepreneurial skills 	<ul style="list-style-type: none"> ▪ is able to retrieve and analyse information of one's own subject and neighbouring fields and to critically evaluate and holistically perceive it as well as to generate new knowledge ▪ masters the methods of research and development work and is able to independently carry out R&D projects of one's field ▪ knows the intricacies of project work and is able to to work in projects and manage them ▪ works initiatively and proactively and is able to start and implement change processes ▪ is capable of creative and innovative problem solving and decision making at one's work ▪ is able to start profitable and customer-focused development projects ▪ is able to guide and mentor others
Organisational and societal competence	<ul style="list-style-type: none"> ▪ knows the socio-economic interdependence of the organisations in one's subject field ▪ knows the possibilities of societal influencing for the development of one's field ▪ knows the basic principles of organisational management and leadership and has abilities for supervision tasks ▪ knows the methods of working life and is able to operate in work communities ▪ is able to plan and organise activities 	<ul style="list-style-type: none"> ▪ knows the socio-economic interdependence of the organisations in one's subject field ▪ knows and is able to utilise the possibilities of societal influencing ▪ knows the organisational and work cultures and is able to participate in intra-organisational and inter-organisational coordination, development and management ▪ is able to evaluate the operations of a work community and to plan, organise and develop activities in the changing situations in working life ▪ is able to perceive holistically wide entities and cause – effect relationships as well as to operate in demanding situations requiring versatile competences even when there are constraints of information
Internationalisation competence	<ul style="list-style-type: none"> ▪ possesses spoken and written communicative competence at least in one foreign language necessary for one's work and for professional development ▪ understands cultural differences and is able to work together with people coming from different cultural backgrounds ▪ is able to use international sources of information of his/her own field ▪ understands the effects and opportunities of internationalisation in one's own field 	<ul style="list-style-type: none"> ▪ possesses the written and spoken communicative competence in one or two foreign languages necessary for one's work and for professional development ▪ understands cultural differences and is able to operate in diverse international environments ▪ is able to apply international knowledge and competences in one's own field ▪ possesses an overview of the position and importance of the profession in the international environment