

Appendix 2. ENOP-EAWOP Model

**European Curriculum Reference Model
with Minimum Standards
for W&O Psychology:
Basic and Advanced**

ENOP. European Network of Organizational and Work Psychologists
EAWOP. European Association of Work and Organizational Psychology

PREFACE

During the 1990s European Network of Organizational and Work Psychologists (ENOP) developed the European Curriculum in W&O Psychology Reference Model and Minimal Standards with the purpose of harmonising and defining the minimum core of education for W&O psychologists in Europe. Recent changes in higher education and in professional mobility in Europe require an update of the model and a joint effort from ENOP and the European Association of Work and Organizational Psychology (EAWOP) has undertaken this task. The purpose of this revised version of the Model is to provide the minimum educational requirements for the basic and advanced education for the practice of Work and Organizational Psychology.

Background

ENOP is a network of university professors in work and organizational psychology established in 1980. The network has organized a wide range of scientific and educational activities, including comparative research programmes, conferences and workshops, student and teacher exchange programmes, summer schools etc.¹.

During the 1990's ENOP has developed a model of the curriculum for the training of work and organizational psychologists in Europe. Initially these efforts concentrated on the clarification of the state of affairs concerning the training in the various countries of Europe and at the development of a common frame of reference model that aimed to facilitate the comparison of curricula and the design of more harmonized curricula. The first so-called 'Reference Model' was discussed in ENOP at its Symposium on February 25-27, 1993, and in a special session at the 6th European Congress of Work & Organizational Psychology (Alicante, April 14-17, 1993). Comments were also solicited from associations and interest groups in the various countries of Europe, as well as from readers of 'The European Work and Organizational Psychologist'². A revised model, established at the ENOP Symposium of March 10-12, 1994, served as a basis for a survey of the actual situation with regard to the teaching of W&O psychology in Europe. This survey, conducted in the fall of 1994 revealed which parts of the model were (and were not) present in the curricula of the various European universities, and allowed to identify the common core of W&O psychology as well as the variations across the curricula of the different universities.

The model was published by the Maison des Sciences de l'Homme and distributed across Europe. It has proved to be useful in helping to design new curricula at European universities, to organize joint programs and to review research carried out in different countries.

At the end of the 90's the Bologna Declaration (1999) introduced important changes in higher education in Europe aiming to create a Common Space for Higher Education in Europe by 2010 and to promote mobility of professionals in the European Union as well as to enhance professional qualifications and the quality of European universities. The proposal of a common structure including bachelor, master and doctoral studies, the establishment of the European Credit Transfer System (ECTS) and the introduction of the Diploma Supplement to enhance the transparency of knowledge and qualifications delivered in the Diploma, are the main issues that the Ministries of Education of European countries agreed upon.

In the field of Psychology a working group of European psychologists defined a framework for education, funded by EU's Leonardo da Vinci Program (Lunt et al. 2001; Lunt, 2002)³. The resulting document, entitled '*EuroPsyT*'.

¹ An experiment in international social science cooperation. A dozen years in review. ENOP Reports, No. 1, 1994. Paris: Maison des Sciences de l'Homme.

² Roe, R.A., P. Coetsier, Cl. Levy Léboyer, J.M. Peiró, B.Wilpert (1994). The teaching of Work and Organizational Psychology in Europe. Towards the development of a Reference Model. *The European Work & Organizational Psychologist*, 4 (4), 355-365.

³ Lunt, I. (2002). A common framework for the training of psychologists in Europe. *European Psychologist*, 7, 180-191.

A framework for education and training for Psychologists in Europe was published and adopted by EFPA in 2001. In the second Leonardo Project, the European Diploma of Psychology (EuroPsy) has been developed with the aim “to set a standard with regard to dependent and/or independent practice in one or more professional contexts, at the point of entry in the profession. The standard defines minimum requirements which individual psychologists are likely to exceed”. The Diploma was also adopted by EFPA in 2005 (www.efpa.be). One of the three contexts of practice is Work & Organizational psychology.

Meanwhile, there have been scientific and professional developments, as well as innovations in theories, technologies, contexts of practice, clients etc. that have raised the demands for quality in services of Work and Organizational Psychology. Moreover, internationalization of the discipline and mobility of professionals in Europe is becoming more and more frequent.

In this context, EAWOP, in coordination with ENOP, has created a Task Force to formulate a proposal about the contents and requirements of the Advanced Diploma in Work and Organizational Psychology. The Task Force consisted of José M. Peiró (chair), Lourdes Munduate (link with EAWOP Ex. Com.), Marco Depolo, Robert Roe, Branimir Sverko and Matti Vartiainen. All of them were members of EAWOP and three of them also members of ENOP. The Task Force has reported on its activities at the XII and XIII European Congresses of Work and Organizational Psychology, at the 2006 and 2007 ENOP Annual symposia and in several meetings of EAWOP Constituents that took place during the same period of time. The present document is one of the outputs of this Task Force. It intends to facilitate the further harmonization of W&O psychology education and professional practice in Europe. It defines two sets of standards for the education of W&O psychologists, at the basic and an advanced level. These standards indicate the minimum requirements that curricula should meet in order to be considered as providing the necessary academic and professional preparation for the two levels of professional practice in W&O psychology.

TABLE OF CONTENTS

	Page
1. Introduction	4
2. The Reference Model	5
2.1. Dimensions	5
2.2. Structure of the model	8
2.3. Content of the model	9
2.4. Didactics	11
3. Minimum Standards	12
3.1. Curriculum unit	12
3.2. Total size of the curriculum	12
3.3. Composition of the curriculum	12
3.4. Content of curriculum	14
3.5. Didactics	17
4. Use of the Reference Model and Minimum Standards	18
4.1. Curriculum design	18
4.2. Curriculum evaluation	18
4.3. Assessment of students	18
4.4. Accreditation of psychologists	19
4.5. Promotion of W&O-psychology	19

1. INTRODUCTION

This document describes the structure and contents of an academic curriculum that provides the necessary qualifications for those who want to work in the areas of W&O Psychology. It provides two sets of standards. The first specifies the requirements that have to be met by those who want to become psychologists in Europe and work in the field of W&O Psychology without being a W&O Psychologist. The second one specifies the requirements for those who want to become a registered European 'W&O psychologist'. These two levels of occupational practice will be referred to as basic and advanced.

It should be acknowledged that the curriculum described here only covers the academic education for these two levels of occupational activity, and thereby addresses only part of the process by which W&O psychologists acquire and maintain their qualifications. However, the contents of the curriculum can be adapted and used in the post-master education. In most European countries there exists a system of further preparation for professional activity as well as for continued education meant for those who have graduated from the university. For professional work such ongoing education typically includes post academic training courses, supervised practice and accreditation. For research work there are advanced training courses and workshops, Ph.D. programmes etc.

The structure of both types of curriculum is laid down in a model, the so-called Reference Model, while their contents are specified in Minimum Standards. These two parts together can be considered to define 'common core' of qualifications W&O psychologists need to have, i.e. the required knowledge, skills, attitudes, and competences.

The curriculum is supposed to be a part of the university based education programme in psychology. This means that certain knowledge and skills are assumed to be acquired outside the framework of the W&O curriculum, preferably before the curriculum starts. As entrance requirement a general education in psychology of 180 ECTS with the contents established in the European Certificate in Psychology (EuroPsy). For a full description of the minimum requirements and standards for the Curriculum of EuroPsy, see the documents and Annexes of EuroPsy.

According to the Bologna structure, as it is being implemented in Europe, the study of Psychology typically consists of three levels: a first level leading to a Propaedeutic or Bachelors Degree (BA), a second level leading to a Master's Degree (MA), and a third level ending with a Doctor's Degree (PhD). The first two levels are normally considered to be sufficient for becoming a psychologist (in some countries only after a special examination). Moreover, EuroPsy has established the minimum requirements of 300 ECTS plus 60 ECTS of supervised practice to be entitled to work as Psychologist in Europe.

The present document proposes a generic curriculum model that can be used in two ways. First, to specify the requirements that should be met by a psychologist who enters into supervised practice in the field of Work and Organizations in the context of EuroPsy. These requirements are formulated in terms of contents and a minimum number of credits that should be devoted to this content. Secondly, to specify the requirements for those who want to be accredited as European Work and Organizational Psychologist. These requirements are again formulated in terms of contents and numbers of credits, but now they cover bachelor, master and post-master phases.

The Reference Model only pertains to the education of W&O psychologists *stricto sensu* or to psychologists who aim to carry on their year of supervised practice in the field of Work and Organizations. It does not apply directly to training programmes for related specialities of professions, even though such programmes may contain elements from W&O psychology, and those who studied W&O psychology are among those who practice such specialties or professions. Thus, the model does not pertain to the training in Ergonomics, Cognitive

Engineering, Human Resource Management, Business Administration, Industrial Relations, and the like. However, as will be outlined below, the model can be used in verifying and improving the content of training programmes in such fields.

The starting point for the development of the Reference Model has been a view of 'what W&O psychology *is*' both as a discipline and a professional speciality, rather than the state of affairs at the labour market for work experts with a background in the behavioural sciences. It is recognized that the labour market is of great importance in determining the actual shape of W&O psychology as an occupation, but it is held inappropriate to let the diverse and changeable conditions of supply and demand for professionals, and the underlying economic mechanisms define the boundaries and content of the training of W&O psychologists. A consequence of this choice is that the model offers a balance between theory and methodology on the one hand, and practical skills and competences on the other hand.

The following sections of this document describe the structure and content of the model. The Reference Model and the Minimum Standards are normative in character, that is to say they represent the view of ENOP and EAWOP on the requirements a university curriculum should minimally meet in order to provide European W&O psychologists with the proper academic qualifications.

2. THE REFERENCE MODEL

The Reference Model shows the basic dimensions and structure of the curriculum, i.e. the major facets to be distinguished and the main content areas to be covered. Below the model's dimensions and overall structure are presented, and a generic description of its content is given. Moreover, a list of didactic methods suitable for presenting the content is given.

2.1. Dimensions

The model has four dimensions: educational objectives, fields of study, type of science, and depth-of-specialization which are described here below.

2.1.1. Educational objectives

Generally speaking four sets of educational objectives can be distinguished:

- a. the acquisition of knowledge
- b. the acquisition of skills
- c. the acquisition of competences for professional activity (intervention and development)
- d. the acquisition of competences for scientific research.

The term *knowledge* is used to refer to theories and concepts on work and organizational phenomena, to methods and techniques for studying them, and to empirical data. Knowledge should be conceived in a broad way. It includes the awareness of different approaches, the relationships between theories, etc. The term *skills* denotes the ability to apply knowledge and to effectively use methods, procedures and techniques. *Professional competences* are complex sets of knowledge and skills by which problems encountered in professional practice can be solved. And *research competences* are similar sets of knowledge and skills needed in designing and conducting research studies.

While the dimension of educational objectives is of a general nature it is used in the Reference Model to refer to knowledge, skills, and problems that are typical for the world of work and organization. General research methods and strategies, although certainly important, are supposed to be dealt with in the context of the psychology curriculum as a whole, and hence be left out of consideration.

2.1.2. *Fields of study*

It is generally recognized that the discipline of W&O Psychology covers three fields of study, each of which focuses on different parts and aspects of human work activity. These fields are:

- work psychology
- personnel psychology
- organisational psychology.

Work psychology concerns people's work activity, i.e. the way in which people deal with their tasks in given contexts. Persons are seen as workers who (individually and collectively) perform tasks that are derived from the work processes taking place in the organization. Important subjects are: tasks, work environment, time arrangements, performance, error, effort, load, fatigue, well-being, task and job design, tool design, technology, (cf. ergonomics), etc.

Personnel psychology concerns the relationship between persons and the organization, in particular the establishment of the relationship, its development, and termination. Persons are seen as individuals who at a certain stage of their career become 'employees' of an organization. Important subjects are: choice processes of individuals and organizations, abilities and capabilities, skills and competences, needs and need fulfilment, commitment, methods of selection, career development, appraisal, rewarding, training and competence development etc.

Organizational psychology concerns the (collective) behaviour of people in relation to the shaping and functioning of socio-technical arrangements designated as organizations. People are involved in this arrangement as 'members'. Important subjects are: communication, decision making, power, leadership, participation, cooperation, conflict, organizational culture, organizational structure, technology, organizational change and development, intra and interorganisational relations etc.

It should be noted that in some countries different notions are being used, pertaining to combinations or cross-sections of the three fields mentioned here. Examples are: Industrial psychology, Occupational psychology, Organizational Behaviour and so on. The three fields of study have been chosen because they can be differentiated from one another rather well, in scientific as well as professional respect. In spite of some overlap, there are differences in terms of object of study and research methods on the one hand, and diagnostic and intervention methods on the other hand.

The relative development of the fields and the importance assigned to them have shown differences in the various European countries. In some countries there has been a single dominant area (e.g. work psychology in France, or in some Eastern European countries), in other countries one could see two main fields emerge (e.g. work psychology and organizational psychology in Sweden, or personnel psychology and organizational psychology in Spain), and so on. In other cases there has been a more balanced situation with a more or less equal position of the three fields (e.g. in Finland, Germany and the Netherlands). Although differences in emphasis are still visible in both scientific research and teaching, and in professional activity, there is an apparent trend towards more balance between the three fields and a growing convergence between the European countries.

2.1.3. Type of science

The third distinction to be made is that between explanatory science, or science that tries to understand existing reality on the one hand, and technological or change-oriented science, that aims at changing reality on the other hand. While some disciplines are characterized by the prevalence of one of these types of sciences, this is not true for W&O psychology. As this discipline deals with a reality that is by its very nature created and modified by man, it has components of both technological and explanatory science. For example, one finds both theory on work performance and on performance optimization, on workers' abilities and personnel selection, or on organizational analysis and organizational design. The relative emphasis on either type of science shows some variation from country to country, though.

The distinction between science and technology referred to here, should not be confused with that between fundamental and applied research. Both explanatory science and technology have their fundamental research, and both can be applied by practitioners to singular problems of people or organizations. Research on principles of selection can be considered as an example of fundamental technological research. The explanation of a particular state of conflict that a client organization is in, a case of organizational diagnosis represents an example of applied explanatory science. And so on. The application of technology implies to use and/or design of intervention methods and artefacts (e.g., tests or appraisal procedures, reward or work-time systems, ergonomic work tools)

2.1.4. Depth-of-specialization

Theories and methods of W&O Psychology can be dealt with at various levels, differing in breadth of scope and degree of detail. It is assumed that in general three levels can be distinguished: (a) the level of systematic introduction, covering principles, methods and facts of a certain subject area, (b) the level of focused study of problems and methods, and (c) the level of detailed study of a particular issue. The curricula offered by different universities differ with respect to the level of depth reached and the topics of greater specialization. In this way universities show their unique profile and history. The Minimum Standards allow for such diversity, but they also emphasize the need for commonality at the lower levels of specialization.

2.1.5. Content and Methodology

All of the domains that are covered in the model should consider both contents and methodological aspects. In the methodological aspects both research and intervention methods should be taken into consideration.

2.2. Structure of the model

By crossing the four educational objectives (knowledge, skills, professional and research competences) by fields of study mentioned above a multidimensional matrix is obtained that shows the structure of the curriculum. For the purpose of graphic presentation the first three dimensions (educational objectives, fields of study and type of science) are selected and arranged in a two-dimensional layout in the following figure.

The fourth dimension (depth of specialization) and the fifth one (methodology) are not displayed, since they do play a minor role in the Minimum Standards. It should be born in mind that existing curricula may differ in level of specialization, and that all curriculum components represented by the cells of the figure may differ with respect to this dimension.

Table 1: Reference Model

WORK	PERSONNEL	ORGANIZATION	objective / type of science
General course (G)			Orientation
W1	P1	O1	Knowledge of theories (<i>explanatory</i>)
W2	P2	O2	Knowledge of theory (<i>technological</i>)
W3	P3	O3	Diagnostic skills (<i>explanatory</i>)
W4	P4	O4	Intervention and design skills (<i>technological</i>)
Professional training (e.g. stage, ethics course)			Professional competences
Research training (e.g. research project, advanced method courses)			Research competences

2.3. Content of the model

The model as presented here helps to set a standard for the content which European curricula in W&O-psychology should meet. That is, it helps to provide an operational definition of the 'common core' of W&O-psychology as it has developed till the beginning of the 21st century. The model is described in two parts. First, the educational objectives are specified, taking into account the distinction between types of science. The objectives correspond to the rows of the above presented matrix. Secondly, a generic description is given of subject matter to be covered by each of the curriculum components. These components correspond with the cells of the matrix. A more detailed description of the curriculum components is given in the section on Minimum Standards.

2.3.1. Educational objectives

The following educational objectives should be met:

1) Orientation

Orientation means: the acquisition of (meta)knowledge about W&O psychology, the context in which it is developed and practised, both at a national level and in Europe, and the general methods of research and application.

2) Knowledge of explanatory theory

The knowledge to be obtained includes empirical knowledge about psychological phenomena related to work, employment relations and the functioning of organizations, as well as knowledge of theories by which such phenomena can be ordered and explained. It also includes meta-knowledge like the awareness of different approaches, the relationships between theories, etc.

3) Knowledge of technological theory

Technological knowledge or 'know-how' pertains to the ways in which the empirical reality of work and the psychological phenomena related to it can be influenced. It includes knowledge of the possibilities for the design of work, personnel management systems, and organizations, and the ways by which they can be implemented and changed. It includes meta-knowledge about different technological paradigms (e.g. selection, training, development) and their relationships.

4) Diagnostic skills

These skills relate to the use of methods, techniques and instruments by which psychological and organizational phenomena can be assessed, including tests, interviews, surveys, observation techniques, job analysis instruments, content analysis, etc.

5) Intervention skills

These skills concern the (re)design of tasks, tools and environments, as well as personnel management programmes (e.g., selection, training and organizational interventions, team building and organizational development). They also concern the implementation of the tools for change management. Skills also cover competence development and participative interventions.

6) Professional competences

These competences include intake, diagnosis, planning, intervention, development, evaluation, reporting, and documentation with regard to a particular type of problem posed by an individual or organizational client. Communication, client participation, and professional ethics are aspects deserving special attention. Moreover, at least basic competences in design and development of new instruments, technology and tools for professional intervention should be acquired,

7) Research competences

Research competences relate to the formulating a research problem, retrieving and reviewing existing evidence, making a research design, sampling, getting access to respondents, data collection, analysis, reporting and documentation.

2.3.2. Curriculum components

Curriculum components are defined as parts of the curriculum covering the knowledge, skills, and competences to be acquired by the students with respect to the various combinations of fields of study and types of science. They are described in terms of topics to be studied and mastered by the students.

1) Courses

Most curriculum components can be operationalized by means of courses or other teaching activities. For the sake of convenience we make a distinction between: courses, apprenticeship (stage) and research projects. It should be kept in mind that courses may take on different didactical forms. The same is true for stages and research projects.

In terms of their content courses may be either 'pure', that is only deal with the particular subject falling into a single cell of the model or be 'integrative' (or 'mixed'), that is cover two or more cells. Courses can also be differentiated in terms of depth-of-specialization. In a good curriculum both types of courses should be present.

Pure courses offer a basis for a systematic development of declarative or procedural knowledge, while integrative courses help to make connections between various components and domains of knowledge. Integration is often sought along the lines of a problem, a theme and a professional role. Integration can also take place along specific dimensions of the model, e.g. from theory to skills (dimension I), across fields of study (dimension II), from existing reality to change (dimension III). Moreover, integration can be achieved on the basis of a theoretical or methodological approach (e.g. cognitive theories, or qualitative methods).

2) *Apprenticeship (stage)*

The general aim of the stage is to familiarize the student with the professional setting and activity of W&O psychologists, and to acquire basic professional competences as described above. This is achieved by involving the student in a professional activity that brings him into contact with a client (organization) and a typical problem. Typically the student learns to work independently while being supervised by an expert. Different types of stages can be distinguished, like e.g.:

1. orientation type: familiarization to a certain professional setting
2. safari type: temporary presence in the setting for a particular purpose (e.g. the collection of data)
3. rotation type: systematic familiarization with different parts of an organization, different roles, etc.
4. role type: learning to fulfil a particular professional role
5. project type: performing a project (individually or in a team) defined by a company or the university.

3) *Research project*

The general aim of the research project is to develop research competences as were described above, by setting up and executing a research study under supervision by an experienced researcher. Projects can use a variety of methods, and include field experiments. Field studies, case studies, surveys, laboratory studies, and so on. They can be performed in companies as well as in university settings. Typically research projects include a study of the literature on a certain issue.

2.4. Didactics

Didactic methods are of great importance for in the training of W&O-psychology (Table 2). Particularly important is that methods used to confront the students with the reality of work and organization, as it exists in Europe, both in the classroom setting and outside of it. The professional and research competences deserve special attention as well, as they have some unique features not found in other fields of psychological study. There is a need to disseminate the best didactic methods in order to improve the general effectiveness and efficiency of training. Table 2 shows some didactic methods currently in use in European W&O curricula, structured according to the type of educational objective served.

Table 2: Examples of didactic methods

Knowledge	Skills
1. Lecture 2. Lecture & questions 3. Demonstration 4. Audiovisual 5. learning environments (computer based conferences)	8. Exercise (use of technique or tool) 9. Computer exercises 10. Simulation / role play 11. Student assignment 12. Student group assignment

6. Practitioner's report / guest lecture 7. Student reading	13. Case study 14. Problem based tasks.
Knowledge & skills	
15. Discussion meeting 16. Small group discussion 17. Student oral presentation 18. Student paper 19. Site visit / excursion	

3. MINIMUM STANDARDS

This chapter describes the minimum requirements concerning the size and contents of the basic and advanced education within the W&O curriculum as needed for becoming a Registered European Psychologist working in the field of W&O Psychology (basic level), or a Registered European W&O Psychologist (advanced level). Therefore it operationally defines the basic academic qualifications needed to become a W&O psychologist, and the requirements for specialization within the discipline of W&O psychology below a definition is given of the units used for quantifying the curriculum components, the total size of the curriculum, and the composition of the curriculum.

3.1. Curriculum unit

In order to describe curricula and to formulate requirements ECTS units (henceforth: credits) are used. One credit is typically understood to be equivalent to 25-30 hours of student's work, assuming that at least around a third are contact hours.

3.2. Total size of the curriculum

There are two sets of requirements concerning the W&O psychology curriculum at a basic and advanced level. At the basic level, corresponding to EuroPsy, there are minimum requirements for admission to supervised work in the field of work & organization. At the advanced level there are requirements concerning the qualification as European W&O psychologists. The basic level requires at least 30 credits, and the advanced level requires at least 120 credits as specified in the following section (Composition of the curriculum).

3.3. Composition of the curriculum

The curriculum must cover all curriculum components outlined in the preceding chapter. However, there may be differences in emphasis on fields of study and/or types of educational objectives. The following figures express the limits within which the composition of the curriculum may vary. They provide a flexible definition of the 'common core' of European W&O psychology in operational terms.

The requirements are presented in two tables (3a and 3b). The first one presents the minimum standards to be applied in EuroPsy to get admitted to supervised work in the field of W&O Psychology. The second table presents the minimum standards for obtaining the Advanced European certificate in W&O Psychology.

Table 3a should be understood as follows:

1. At least 6 credits must be devoted to each of the fields of work, personnel and organization.
2. Minimally 2 credits must be devoted to an orientation course.
3. Minimally 12 credits must be assigned to theoretical courses. No requirement is formulated concerning the balance between the two types of knowledge (explanatory and technological). However both should be represented in the curriculum.
4. Minimally 12 credits to be devoted to courses on diagnostic and intervention skills. No requirement is formulated concerning the balance between the two types of skills. However both should be represented in the curriculum.
5. A stage and/or research project is recommended. It is held desirable that students follow both a stage and a research project. No minimum size for each is considered

Table 3a – W&O Psychology Reference Model: Minimum standards for EuroPsy (basic level)

min. 6	min. 6	Min. 6	
Work	Personnel	Organization	
Orientation course			min. 2
Courses on explanatory & technological theory			min. 12
Courses on diagnostic & intervention skills			min. 12
Stage & research project			recommended
Total			min. 30 ECTS

It is intended that only people able to show such minimum requirements can enter into the WO field for supervised practice in the context of EuroPsy

Table 3b - W&O Psychology Reference Model: Minimum standards for Advanced European Certificate in W&O Psychology (advanced level, including the minimum standard for EuroPsy).

min. 12	min. 12	min. 12	
Work	Personnel	Organization	
Courses on explanatory & technological theory			min. 18
Courses on diagnostic, instrument development & Intervention skills			min. 24
Stage & research project			min. 30
Total W&O Psychology			min. 90 ECTS
Other subjects			
Total			min. 120 ECTS

Table 3b should be understood as follows:

1. At least 12 credits must be devoted to each of the fields of work, personnel and organization.
2. Minimally 18 credits must be assigned to theoretical courses. No requirement is formulated concerning the balance between the two types of knowledge. However both should be represented in the curriculum.
3. Minimally 24 credits to be devoted to courses on diagnostic and intervention skills. No requirement is formulated concerning the balance between the two types of skills. However both should be represented in the curriculum.
4. Minimally 30 credits must be assigned to a stage and/or research project. It is held desirable that students follow both a stage and a research project.
5. Work, personnel and organization psychology contents must totalize at least 90 credits. Since the whole curriculum consists of at least 120 credits, there is room for a variable amount of credits in other subjects.

It is intended that only people able to show such minimum requirements can start the procedure for the qualification corresponding to the Advanced European Certificate in W&O Psychology.

3.4. Content of the curriculum

The requirements concerning the content of the curriculum are described in terms of the specific objectives to be reached and areas (cells of the matrix) to be covered. For each of the curriculum components (cells of the matrix) the objectives and contents are defined. Below in this section we describe a generic and comprehensive account of the content that is ideally covered in a W&O Psychology curriculum. A description is given of different curriculum components (cells) organized in terms of fields, type of knowledge and education objectives.

In evaluating the curricula that applicants have studied, certain coverage of this content is required. Although, there are considerable degrees of freedom regarding the make up of their curricula, there are certain minimum requirements to be fulfilled. This applies both to the basic and the advanced level.

3.4.1. Orientation course

The orientation course must enable the student to acquire general knowledge about work & organizational psychology as a discipline and professional field, its object of study, typical problems addressed, main theoretical approaches, some typical concepts and methods, forms of practice, ethical and legal aspects of the profession. The course must devote attention to the relationship between work and other domains of human life and activity, as well as to the relationship between W&O psychology and adjacent fields of science (i.e. other disciplines dealing with work and organization, and other fields of psychology), both with special reference to the European context. To be included are the meaning of work, work values and attitudes, quality of work and unemployment.

3.4.2. Courses on explanatory theory

W1. Courses in work psychology should enable the student to obtain knowledge about the main psychological theories on work as an individual and collective activity. Attention should be devoted to the mental, physical and social processes involved in goal-directed action and the regulation thereof, performance (including errors), work outcomes, and adaptation, as well as to various personal and situational conditions and concomitants. To be covered with respect to the person are: knowledge, skills, competences, motivation, emotions, functional states, fatigue, stress, and satisfaction, and with respect to the situation: working conditions, work processes, tasks, tools, information, working conditions, temporal arrangements, hazards and risks.

P1. Courses on personnel psychology should enable the student to obtain knowledge about the main psychological concepts and theories concerning work careers and the employment relationship and human resources. To be covered are theories of careers and career development both within a life-span perspective (needs, values, interests, goals, career anchors, competences, life span, career stages, career transitions, career choice, types of careers, job insecurity and unemployment), and an organizational perspective (organizational entry, organizational socialization, models of organizational careers, the psychological contract, retirement). Also to be covered are theories on the psychological facets of human resources management and development as far as relating to the employment relationship, including recruitment, appraisal, selection, placement, training, career planning, outplacement, career development, performance management and reward systems). Furthermore, attention must be given to contextual factors influencing careers and employment relations, such as changes in industrial relations, the labour market, new organizational forms, and the intersection of work and non-work roles.

O1. Courses on organizational psychology should provide the student with basic theoretical knowledge about organizational phenomena and the way in which they are influenced by and exert influence on psychological factors and processes related to individual and group and organizational behaviour. The organizational phenomena include organizational structure, inter and intra group processes, power, conflict, cooperation, communication, decision-making, participation, organizational procedures, leadership, climate and culture, values, organizational learning, organizational performance, commitment, identification, interorganisational relations and organizational environments. The topics are to be dealt with from the perspective of major theoretical approaches, including organizational growth, bureaucratic theory, systems theory, role theory, field theory, structuration theory and social constructionism. Attention should also be given to empirical trends, i.e. the emergence of new organizational forms, such as network organizations and mobile virtual organizations.

3.4.3. Courses on technological theory

W2. The courses should provide the student with know-how concerning interventions in the field of work, such as development of work places, job and task design, work process design, the design and improvement of work methods and tools, work time arrangements, design of technology and software, design of teams, as well as skill training and competence development. Attention is to be paid to the main theoretical approaches for optimizing

outcomes, including sociotechnical system approaches, humanization of work, quality of work, and ergonomics, as well as to the different types of criteria involved, i.e. effectiveness, satisfaction, work load, safety, stress and health.

P2. The courses should provide the student with know-how about career choice and development, management development, skill training, competence development, manpower planning, personnel recruitment and selection, performance evaluation and remuneration, industrial relations techniques. To be included are methods for the analysis of jobs, tests and other assessment techniques, methods for decision-making and utility assessment, as well as methods for career counselling and training (including training need analysis). The students should be familiarized with the design of systems to fulfil these functions, and with various aspects of the professional role of the psychologist using these methods and systems.

O2. The courses should provide the student with know-how about psychological interventions in the field of organizations, both aiming at the design or planned change of systems (or subsystems) and at organizational transformation and development. Students should understand the interrelationships of specific intervention techniques with organizational intervention paradigms. Topics to be covered include: theories of organizational change and learning, approaches to organizational design and redesign and approaches to organizational development such as action research. Specific topics like leadership and participation with regard to organizational change, team development, conflict management and resistance to change should also be covered.

3.4.4. Diagnostic skill courses

W3. The courses should give the student an overview of approaches and methods for various types of work analysis, show how to find more detailed information about particular methods and tools, and provide the opportunity to select and apply such methods and tools in at least two specific domains. Relevant types of work analysis are: work process analysis, task and job analysis, work requirement analysis, activity analysis, analysis of human functional states (activation and effort, emotions, fatigue, boredom, stress, body rhythms etc.), the analysis of performance and work outcomes, error diagnosis, the evaluation of working conditions, work risk analysis, analysis of work group interdependencies, analysis of social interaction and cooperative work. Among the methods to be covered are: use of secondary data observation techniques, psychophysiological measurements rating scales, interviews, questionnaires, qualitative methods.

P3. The courses should give the student an overview of approaches and methods for individual assessment, and show how to find more detailed information about particular methods and tools for the assessment of people's needs, cognitions, emotions, interests, values, life goals, and career objectives, as well as abilities, skills, competences and performance. The student should learn to compose a procedure for either career development, selection, evaluation, remuneration or training, incorporating such methods. Moreover, the student should learn to apply interviews and tests to measure a particular range of individual characteristics and/or performance.

O3. The courses should give the student an overview of approaches and methods for various types of organizational analysis, show how to find more detailed information about particular methods and tools for the diagnosis of organizational states and processes, and the assessment of organizational parameters and outcomes. The student should be given the opportunity to select and use two or more of such methods and tools within the context of organizational change and organization development. Among the methods to be covered are: observation techniques, document analysis, survey techniques, work flow analysis, communication analysis, safety and quality audits, analysis of organizational climate and culture, and organizational structure analysis.

3.4.5. Intervention skill courses

W4. The courses should give the student an overview of approaches and methods for intervention methods relating to the (re)design of work and the optimization of human work activity, and show how to find more detailed information on particular methods. The student should be given the opportunity to select and apply two or more intervention methods. The intervention methods may relate to work process design, job or task design, the design and improvement of work methods and tools, work time arrangements, work teams, as well as skill training and competence development.

P4. The courses should give the student an overview of approaches and methods for intervention relating to career development, selection, evaluation, remuneration or training, and show how to find more detailed information on particular methods. The student should be given the opportunity to select and apply two or more intervention methods, taking into account the results of relevant assessments. Applying the methods implies: organizing and conducting consulting sessions, providing feedback, guidance, advice, or training, communicating with employees, managers, and relevant others, effectively deal with resistance, conflicts and complaints, and implementing administrative measures.

O4. The courses should give the student an overview of approaches and methods for organizational design and functioning, and show how to find more detailed information on particular methods. The student should be given the opportunity to select and apply two or more intervention methods. Relevant are: general approaches to organizational design and development, as well as specific methods such as group feedback analysis, and intervention methods related to the introduction new technologies, quality control and assurance, conflict mediation, conflict management, team development, team building, communication system design, design of safety, health and environmental protection systems.

3.4.6. Apprenticeship

The apprenticeship (stage) should give the student the opportunity to work on a particular type of problem posed by an individual or organizational client, while supervised by a qualified psychologist. This should help the student to develop competences such as: intake, diagnosis, planning, intervention, evaluation, reporting, and documentation. Special consideration should be given to communication, client participation, and professional ethics. Apprenticeships should be performed on the basis of a plan and concluded with a report.

3.4.7. Research project

The research project should give the student the opportunity to answer a generic question in a scientifically valid way. This should help the student to develop research competences related to the formulating a research problem, retrieving and reviewing existing knowledge, making a research design, sampling, getting access to respondents, data collection, analysis, reporting and documentation. Research projects should be performed on the basis of a plan and concluded with a report.

3.5. Didactics

It is acknowledged that educational objectives can be achieved in very different ways. Since the results are considered to be more important than the ways in which they are achieved, these Minimum Standards do not pose requirements other than that the didactic methods be appropriate to achieve the educational objectives. It is held desirable, though, that guidelines on didactics be developed in the near future and that 'good practice' examples are being disseminated.

4. USE OF THE REFERENCE MODEL AND MINIMUM STANDARDS

The Reference Model and the two sets of Minimum Standards can be used for various purposes. Its main functions are to serve as

1. a guideline for curriculum design
2. a standard for evaluating curricula
3. an aid in promotional activities.
4. a tool for the accreditation of psychologists

These four functions are specified below.

4.1. Curriculum design

The Reference Model and Minimum Standards for basic and advanced level should, first of all, be considered as a guideline to be followed by those who wish to provide a basic training in W&O psychology to psychology students or an advanced training for those aiming to achieve a specialized or expert qualification in the field. The model will help curriculum designers and teachers to give current W&O programmes the appropriate content and stimulate curriculum innovation, both at the basic and advanced level. A wide-scale use of the Reference Model will help to achieve convergence of curricula in terms of structure and contents, which enhances the opportunities for the harmonization of teaching in Europe, and indirectly facilitates future cooperation and exchange, as well as the mobility of professionals across Europe.

Several design options are possible to fulfil these requirements. One option could be to include all the educational requirements in a specialized Master (such as the Erasmus Mundus on Work, Organizational and Personnel Psychology: www.erasmuswop.org). Another option could be to organize Work and Organization Psychology education as post-master studies (such as Specialization training Program in W&O Psychology in Finland: www.psykonet.fi). Other mixed alternatives are possible: it should be clearly intended that this Reference Model do not dictate any compulsory design option to reach the above mentioned educational goals.

4.2. Curriculum evaluation

ENOP and EAWOP will promote the use of the Reference Model and Minimum Standards as a standard for evaluation by installing an evaluation body, that will invite European universities and Institutions interested to submit their existing curricula for evaluation. Universities may also submit their curriculum upon their own initiative and ask for an evaluation. Curricula which satisfy all requirements will be recognized as conforming to the Reference Model. When a curriculum does not fully meet the criteria its deficiencies will be noted and recommendations for revision will be given.

4.3. Promotion of W&O psychology

Another use of the Reference Model and Minimum Standards will be to support promotional activities aiming at exhibiting the profile of European W&O psychology and its differences compared to other specialties in psychology as well as other professions.

4.4. Certification of psychologists

The Reference Model and the minimum standards presented here have been designed for the purpose of accreditation. They serve as a tool to establish whether a psychologist is qualified to

- 1) enter into supervised practice in the field of W&O Psychology in the context of EuroPsy.
- 2) Obtain the Advanced European Certificate in W&O psychology.

It is recommended that this reference model and standards be used in connection with the EuroPsy system as managed by EFPA and the awarding of the Advanced Certificate in W&O Psychology by EAWOP.

