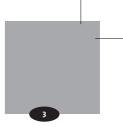


Prospectus Psychology

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Foreword

This prospectus will give you a detailed overview of our psychology curriculum, information about the educational approach (problem-based learning) and some facts about Universiteit Maastricht.

The Maastricht programme is an innovative curriculum. For one, it uses problembased learning as its educational approach. Secondly, it uses cognitive psychology and biological psychology as systematic perspectives to organise its content. It does so, because we believe that these two perspectives are the most important viewpoints in psychology today. Finally, the programme aspires to be thoroughly international.

This year our Faculty of Psychology celebrates its fifth anniversary. Because the psychology program lasts four years in total, this means that it was not until last Fall that we had our first graduates. Right at this moment the first hundred will have obtained their master's degree and they have taken their first steps of their career in psychology.

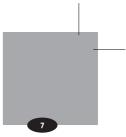
A large number of our graduates (almost 30%) experienced a study abroad period either by doing their research apprenticeship or by following courses at another foreign university. Because of this foreign experience, some of them work abroad and some obtained international grants to study abroad for further specializations.

Our faculty likes to welcome students from abroad as well. That is one of the reasons that a growing number of our courses are taught in the English language. You will find an overview of these courses on the next page.

Our Faculty of Psychology is located in a brand new building in the Randwyck area in Maastricht, next to the Academic Hospital and the Faculties of Medicine and Health Sciences. Down town is only a 10-minute bike ride away. Maastricht, situated near the borders of Belgium and Germany, is an international city indeed. Walking in the center, you will hear people speak French, German, English, Spanish and Dutch of course.

We hope that this prospectus will convince you that we like to welcome you to experience an international academic environment at our Faculty of Psychology.

Professor Gerjo Kok dean Maastricht, August 2000



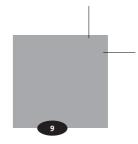
Courses offered in English

Course (ECTS*) Second year: Evolution and Behaviour (6) 2.1 p. 35 Psychopathology (6) 2.2 p. 37 Consciousness (6) p. 41 2.6 Research practical (6) 2.7 p. 42 Third year: 3.3.A Multimedia (6) p. 55 3.3.B Perception, Imagery & the Brain (6) р. 69 Degree course option: Cognitive Ergonomics: 3.4.1 Information Design (6) p. 57 Man Machine Interaction (6) 3.5.1 p. 58 3.6.1 Traffic & Aviation Psychology (6) p. 59 Macro-Ergonomics (6) 3.7.1 p. 60 Degree course option: Educational Psychology: Cognitive & Social Development (6) 3.4.2 p. 61 Knowledge Acquirement (6) p. 62 3.5.2 3.6.2 Instruction (6) p. 63 Assessment, Testing & Evaluation (6) 3.7.2 p. 64 Degree course option: Developmental Psychology: 3.4.4 Infancy (6) p. 76 Perception, Attention & Motor Development (6) 3.5.4 p. 77 3.6.4 Cognition & Language Development (6) p. 78 Social/Emotional Development (6) p. 80 3.7.4 Degree course option: Neuropsychology: Brain Damage (6) p. 70 3.4.3 Behavioral Disorders (6) 3.5.3 p. 72 Activation, Arousal & Psycho-pharmacology (6) 3.6.3 p. 73 Neuro-psychology of Aging (6) 3.7.3 p. 74

Fourth year:

All elective courses in the fourth year are taught in English. Each elective equals 7 ects.

* ECTS: European Credit Transfer System. To cover a full study load, students need to obtain 60 ECTS per academic year.



Psychology at Maastricht University

The Maastricht Psychology curriculum

Program profile

Recent developments in psychology have been marked by two revolutions. One, the cognitive revolution, began in the early 60s but came to full maturity only in the 80s, when computers gradually became both smaller and infinitely more powerful. It was primarily the idea that computer programs could simulate human thought which provided an important stimulus to the rise of cognitive psychology. The cognitive revolution led to new insights into thought and language, not only with regard to people but also animals (research into the use of language by chimpanzees, for example), and to new theories about perception and emotions.

The second revolution began in the mid-1970s. Since that time, our knowledge of the operation of the brain and particularly the manner in which the brain determines behaviour, has increased tremendously. This has been decisive for the development of biological psychology. The biological revolution has radically changed the way we look at human behaviour. Sleep and waking appear to be controlled by the brain. Our sexuality and eating habits are matters not merely of subjective feeling but of hormones and neurotransmitters; it is becoming increasingly clear precisely how the ability to speak and understand language is related to structures of the brain. It appears that the causes of significant behavioural and cognitive disorders (such as schizophrenia and dyslexia) should be sought in biological mechanisms rather than social factors. Cognitive and biological psychology can thus be considered trailblazers for new knowledge and insights in psychology and great things are expected of them in the future.

In Maastricht, the promises and challenges of these revolutions have become the starting point for the development of an innovative educational program in psychology. These two developments in psychology form the basis for the Maastricht program. As with other programs, all sub-areas and aspects of psychology are covered, but cognitive and biological psychology provide the background and organizing principles for the entire curriculum.

Program structure

As in all Dutch universities the psychology program in Maastricht falls into two distinct parts. The first year, or 'propedeuse' (propedeutic year/basic study year) has a selective and orienting function: "Does the student have the abilities to complete the full program?" and "Is the program what the student expected as a professional future?" Upon successful completion of the first year the student obtains the 'propedeutic degree' and then moves on to the second part of the program, the so called 'doctoral phase' (degree course) which leads to the 'doctoral degree' (roughly equivalent to a masters degree in the Anglo Saxon system, or to a Diplom in the

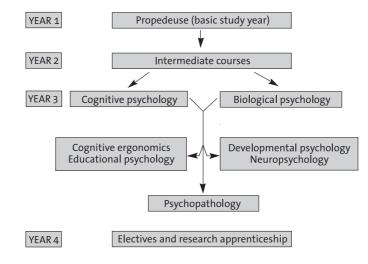
PSYCHOLOGY AT MAASTRICHT UNIVERSITY

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German system). This part of the program takes three years to complete. Hence the full length of the psychology program is four years.

With regard to the content of the program: the first two years are aimed at providing a broad, general knowledge of psychology and are the same for all students. At the end of the second year, students choose between two broad tracks (degree programs): cognitive psychology or biological psychology. Within each of these they can opt for further specialisation. Cognitive psychology splits into cognitive ergonomics and educational psychology; biological psychology splits into neuropsychology and developmental psychology. A choice for each of these is taken halfway through year three.

In the fourth year, students may add their own accent to their studies by means of electives and a research practical.



On average the program requires about forty hours per week. Each academic year is divided into 6 week courses, called 'courses', with seven courses in a year. These courses are constructed on the basis of central themes (such as development or memory or language) in relation to which knowledge and insights from a number of fields and scientific disciplines are studied. Each course is connected to practical training courses in which students learn specific skills, in relation to the subject matter in the current course. In addition, research methods and statistics, computer skills, writing skills and English are offered as part of a program, which runs parallel to the courses. This program will require approximately one day of study per week. In the fourth year, 24 weeks (four full course terms) are reserved for research practical and thesis.

The educational system: problem-based learning

The decision to study in Maastricht also implies the choice of a form of education which is quite different from methods commonly employed elsewhere. Training in Maastricht is based on the method of problem-based learning (PBL). In general, the following characteristics of this method can be distinguished:

1. Student-centred

In contrast to traditional forms of education, problem-based learning is not based on the transfer of knowledge from instructor to student but on the student's individual learning process. The student, rather than the instructor, is central.

2. Learning is focused on problems

The starting point for the learning process consists of problems that small groups of students discuss in depth. These problems have been formulated in such a manner that they lead students to a range of explanatory questions. Based on this discussion, students formulate "learning goals", the subject matter which they will study in the following days.

3. Tutorial groups

Instruction takes place in tutorial groups of approximately ten members which meet two times a week. In these meetings, case histories are discussed with the help of the task manual. The tutorial groups are supervised by instructors (tutors) who guide and monitor the learning process.

4. Self-motivation

Focus on problems and group discussion stimulate students to acquire relevant knowledge, insights and skills in a relatively independent manner. This emphasis on self-motivation is a central feature of PBL.

Consequences for educational resources

This alternative educational structure has numerous consequences for the way in which educational resources are employed by instructors and students. In problem-based learning, students are stimulated to consult all sorts of relevant sources in addition to the essential reading material which they must study. These sources are to be found in the so-called "studielandschap" (learning resources centre), which will be described in greater detail hereafter in chapter 5. It is important that students, right from the beginning, learn to deal with different, sometimes contradictory, sources of knowledge and arrive at independent conclusions regarding the value of such insights. There is one essential educational resource which will be described separately: the task manual.

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Task manuals

Each course in problem-based learning utilizes a "task manual" prepared by a team of instructors and students.

The task manual contains all essential information regarding the learning during the term concerned: the person(s) responsible for the course, the subject matter of the course, the knowledge which the student must have acquired by the end of the course, the skills which will be taught during that period, the essential and recommended literature involved and the lectures. The primary component, however, is formed by the tasks or assignments (usually a dozen) for the tutorial group meetings (two times per week during six weeks).

The task manual is always distributed to the students shortly before the beginning of the course.

Internationalization

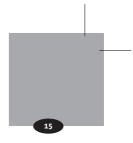
Internationalization is one of the policy missions of Maastricht University. Developments in science do not stop at borders but have a pre-eminently international character. This is definitely true for developments in biological and cognitive psychology. It is thus expected that a number of our graduates will find employment on the international labour market.

To prepare students for this, language instruction is provided and a range of electives and research practicals in foreign countries is being developed.

Organization of the Faculty of Psychology

The Dutch university has been modelled on the German system. This means that a university is organised around a number of so called 'faculties', broad organisational units responsible for both teaching and research in a scientific field. A 'faculty' is thus an organisation, and does not as in the Anglo Saxon system refer to the staff. The Faculty of Psychology consists of two departments (Neurocognition and Experimental Psychology) the sub-department Biological Psychology and the office of the dean.

The most important administrative organ of the faculty is the board, headed by the dean of the faculty of psychology. The board is supported by the office of the dean. Logistical, organisational and administrative support for the curriculum is provided by the Office of Educational Organisation. This office is responsible for all sorts of practical questions and issues. Teachers in the psychology program are for the majority employed within the Faculty of Psychology, but for some specialised fields staff of other faculties, primarily the Faculties of Health Sciences and Medicine is also used. Almost all teaching takes place in the buildings at Universiteitssingel 40 (Uns.40) and Universiteitssingel 50 (Uns.50), both on the Randwyck complex of Maastricht University.



The first year / Basic study year



1.1 GENERAL

The basic study year serves to orient, select, and refer. For this reason, not only a representative picture of psychology and its basic disciplines is presented but also an overview of the subjects that can be majored in and the educational approach utilized at Maastricht University. The design of the basic study year involves, in addition to six regular courses, an initial five-week introductory course.

The first three courses are devoted to the themes Social behavior, Body and behavior, and Perception. The third course is completed prior to the Christmas break. The course Social behavior provides an introduction to social psychology and practice with problem-based learning. The course Body and behavior shows how biological mechanisms determine and influence behavior. Course 1.3 Perception provides an introduction to perceptual psychology.

In course 1.4, Human cognition, cognitive psychology stands central. In the course Development and growth, human development is studied from not only a cognitive but also a biological perspective. In course 1.6, Differences between people, the question of what makes people differ is considered. The basic study year is concluded with a course in which the discipline of psychology is placed within its historical context, namely course 1.7 History and theory.

Parallel to every course and lectures are practicals in which skills connected to the material presented in the lectures are acquired and practiced. In the course descriptions, the specific objectives and content of the practicals are also presented. More detailed information can be found in the syllabus for a particular course.

After completion of a course, a so-called course examination is administered. This can consist of open questions or a combination of open questions and multiple choice questions, with each portion counting for 50% of the exam result.

The parallel program (which is not course related) during the basic study year involves methods and techniques, statistics, and computer skills.

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Parallel program 1.1 Social behavior Training for problem-based Library training learning observational training PC-use RM&T1 1.2 Body and behavior Psychophysiology Statistics 1a Email/Internet RM&T1 1.3 Perception Cognitive ergonomics Statistics 1a Word smell practical CD-ROM 1.4 Human Cognition Cognitive test methods Statistics 1a End-note Development and Observation of children Statistics 1b 1.5 Growth Essay 1.6 Differences between Measurement of psychological Statistics 1b people differences 1.7 History and Theory Essay writing Scientific theory * On request only, courses in year 1 will be offered in English (this does not apply to courses in the parallel program).

1.2 OVERVIEW OF BASIC STUDY YEAR

1.2.1 Description of the courses

Course 1.1 Social Behavior

August 28 - September 29, 6 ects Course coordinator: Louis Boon, Neurocognition

Objectives

The first course is shorter than usual (five weeks: faculty introduction + four weeks) and has a dual objective: To provide a brief introduction to social psychology and to practice with the problem-based learning system on a number of social psychology tasks.

Further description of the course

Education at Maastricht University is based on the method of problem-based learning. In order to function well within this educational system, which clearly



differs from traditional educational methods, some knowledge of the background and key elements is essential along with training on a number of basic skills. The basic introduction (which is part of this course) starts with the skills necessary to work within the tutorial group meetings. The topics to be used in this training are drawn from social psychology, the theme of this course. Half way through the first week, the training shifts to regular tutorial group meetings.

Human behavior is largely geared to and determined by interaction with other people. In this course, not only the biological roots of social behavior but also the typical human aspects will be considered.

The course begins with a few of the classical themes from social psychology: conformity, attitudes and attitude change, cognitive dissonance, and the manner in which people deal with cognitive conflict. Thereafter, the manner in which facial expressions, emotions, and behavior influence each other will be considered. Finally, human ethnology will be examined in connection with the themes of sexuality and aggression.

Essential reading

- Gleitman, H., Fridlund, A.J. & Reisberg, D. (1999). *Psychology (5th ed.)*. New York: W.W. Norton & Company.
- Various articles

Practical

Objectives: To gain knowledge of the methods used to observe behavior. In the observation practical, use is made of ethological video material; after viewing the material and some introductory training, the students make their own observations and score the material.

Course 1.2 Body and behavior

October 2 - November 10, 6 ects Course coordinator: Harry Smit, Neurocognition

Objectives

The course Body and behavior provides an introduction to some important topics from biological psychology. An important goal is to provide insight into the biological psychology. An important goal is to provide insight into the biological bases of psychological phenomena. Sleep, vigilance, and dreaming are important to human functioning. This also holds for eating, drinking, and sexuality. Biological processes are closely associated to psychological processes and social influences.

Together, these processes determine our experience, behavior, thinking, consciousness, and emotions. Course 1.2 is intended to provide examples of this and insight into the relations between physical processes and behavior. Stated briefly, the objectives are as follows:

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- to acquire knowledge of physical processes that play a role in experience and behavior;
- to gain insight into psychological processes (jointly) determined to an important extent by biological mechanisms; and
- to recognize which biological processes in addition to psychological and social factors influence experience and behavior.

Further description of the course

The first week of the course consists of a brain anatomy practical. In the other weeks tasks are devoted to the following topics: brain development, the biological clock; sleeping and dreaming; memory, medications, and behavior; hormones and behavior; and sexuality. Lectures will also present more in-depth information on the case studies. The practicals are intended to provide greater insight into brain-behavior relations. A close connection exists between the material in the practicals and that which is presented in the lectures and tasks for the tutorial group meetings.

Essential reading

• Pinel, J.P.J. (2000). *Biopsychology (4th Ed)*. Boston: Allyn & Bacon.

Practical brain anatomy

Objectives: To provide insight into the relation between brain and behavior; knowledge of brain anatomy.

This practical session is divided into three parts. In the first part, the student works with phantoms of brains from both human and sheeps. The practical serves to provide the student with insight into the structure of the brain and the location of the most important neuro-anatomical structures. In the second part the three-dimensional structure of the brain is being looked at by means of CD-ROMs. In the third part, students can study the anatomy of the brains independently, using an exercise book.

Practical psycho-physiology

By tracing the activity of the brain and that of the heart, one can learn more about the relation between mental effort and biological mechanisms. You will receive practical experience in the psycho-physiological methods used to do this.

Instructional form 10 tutorial group meetings, lectures and practicals.

Examination form

Combination of 5 open and 50 multiple choice questions.



Course 1.3 Perception

November 13 - December 22, 6 ects Course coordinator: Fren Smulders, Experimental Psychology.

Objectives

Introduction to the psychology of perception and its application.

Further description of the course

The psychology of perception is perhaps the best developed branch of psychology. Behavioral studies, neuroscientific research, and advances in artificial intelligence and robotics contribute further every year. The biological substrate of visual perception; the perception of color, contrast, and depth; illusions; (perceptual) attention; perceptual development; and perception in animals are a few of the themes that will be addressed. In addition to visual perception, auditory perception will also be considered in the course.

Furthermore, the students will become acquainted with our chemical senses in one of the practicals.

Knowledge of the capacities of and limitations on the human perceiver will also be shown to help us arrange our world in a better fashion.

Essential reading

- Goldstein, E.B. (1998). *Sensation and perception (5th Ed.)*. Pacific Grove, CA: Bruce/Cole.
- Gleitman, H., Fridlund, A.J. & Reisberg, D. (1999). *Psychology (5th Ed.)*. New York: W.W. Norton & Company. Chapters 5 and 6.
- Various articles

Practical meetings

Objectives: Smell practical: a penetrating acquaintance with the perception of smells.

Instructional form

12 tutorial group meetings, 5 lectures, 1 seminar, audiovisual materials, 2 practical meetings.

Examination form

Combination of 5 open and 50 multiple choice questions.

Course 1.4 Human cognition

January 8 - February 16, 6 ects

Course coordinator: Henk Schmidt, Experimental Psychology.

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Objectives

This course provides an introduction to central cognitive processing: comprehension, knowledge acquisition and knowledge representation, memory, thinking, and problem solving

The students become acquainted with the classical model of the information processing system, which lies at the foundation of the aforementioned processes.

Further description of the course

Human cognition can be construed as the "fast track" for adaptation to changing circumstances in our environment and thus in contrast to the "slower" methods of genetic mutation and (operant) learning. We begin the course with an introduction to the topic of attention. How does our attention help us deal with the information from our external and internal environment in an efficient manner, and what happens when our attention fails? Knowledge and knowledge representation constitute a second topic. The relevant questions here are: In what manner do we internally represent information from our environment, and how do we use this knowledge to interpret the world around us? The structure and functioning of our memories constitute a third topic. How is information remembered in the short and long term? What exactly happens when we "call up" memories? What do neuropsychologists have to say to us about this? The final topic concerns thinking and reasoning. Can certain patterns or laws be detected in our reasoning? How do the expert and the novice within a particular domain think?

Essential reading

Various articles

Practical Experimental methods

Objectives: Within this course, the practical consists of four sessions and will be conducted on the topic of human cognition. The purpose is to acquaint the student with the different experimental arrangements used in the domain of complex cognition and obviously supplement the reading for this course.

During the sessions, a number of frequently used experimental and clinical paradigms will be considered. The practical covers:

- Timing of processes: mental rotation (Shepard & Metzler), Stroop color-word test, and an alternative test for selective attention.
- (Working) memory: semantic memory, memory span tests with and without chunking, Brown-Peterson.
- Planning, executive function: Tower of London, Wason selection task.
- Response latency and divided attention: clinically useful response latency, Paced Serial Task.

In the articles which are to be read and during a lecture, the experimental possibilities for these tasks will be described and just what their clinical neuropsychological use entails. Age norms will be presented, and the students will then test a number of



fellow students. A brief summary of the results will then be compared to the normative values for the group to which the students belong.

Instructional form

12 tutorial group meetings, 10 lectures, 4 practical meetings.

Examination form

A combination of open-ended questions and regular questions, also regarding parts of the practicals. For the practicals, attendance and writing up research results also count. Evaluation of the report is done along a four-point scale: good, adequate, dubious, inadequate.

Course 1.5 Development and growth

February 19 - April 6, 6 ects Course coordinator: Erik van Loosbroek, Neurocognition

Objectives

During this course, the student learns how children develop psychologically. Of particular interest will be how their thinking, reasoning, memory, language, gender identities, and emotions develop over the years. Considerable attention will be paid to such learning processes as habituation, classical conditioning, operant conditioning, and social learning. Also, a number of developmental disorders such as autism and Down-syndrom will be examined.

Further description of the course

The development of and changes in psychological functions from birth through adolescence are the topic of this course. Just how children learn to think, reason, and remember (or their cognitive development) will be examined, and such influential older theories as that of Piaget will be compared to more recent information processing models of development. How does a child reason? How does a child learn to think faster and better? And why is a 6-year old better in playing memory than an adult and why is an adult better in playing stratego than a 6-year old? In addition to these questions, attention will be paid to language development and attachment. It is amazing to see how a newborn baby who does not understand a word and cannot say anything learns to talk within the space of two or three years without, incidentally, the use of dictionaries or grammar books. Yet another important question is how we form attachments and with whom? Is attachment important? Do our early attachments influence our later emotional development? And what is the course of development? When is an active young boy normal and when do we say that he has an attentional disorder?

In other words, an important goal of the present course is to arouse amazement.

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Essential reading

To be announced.

Practicals

Objectives: In the first practical, the student learns classical conditioning via the computer. By manipulating different variables, the student acquires insight into the different ways in which classical conditioning can occur. In the second practical, the student learns to observe and determine the reliability of his observations. Both healthy children and children with a developmental disturbance (autism) are observed. On the basis of a video recording, the behavior of autistic child is observed and scored using the Psycho-Educational-Profile (PEP) test. The developmental level of the child is then determined, and the students must provide an interpretation of the test results.

The students also report on the practical and develop their scientific writing skills by writing a (short) research article.

Instructional form 12 tutorial group meetings, 6 lectures, 2 practical meetings.

Examination form 10 open questions.

Course 1.6 Differences between people

April 9 - May 18, 6 ects

Course coordinator: Harm Hospers, Experimental Psychology.

Objectives

The goal of this course is to acquaint students with psychologically interesting differences between people. In addition, it is attempted to provide an answer to the question of just where these differences may come from.

Further description of the course

Although people differ with regard to a large number of characteristics (such as values, preferences, outward characteristics, and sex) and these different characteristics all have their own psychological ramifications, we will concentrate in the present course on differences in intelligence and personality. On the basis of increased insight into the nature of these characteristics and their determinants, four major questions will be posed.

- To what extent can human behavior be predicted?
- Just how stable or variable is human behavior?
- What role do genetic and other biological factors play in the emergence of (differences in) behavior?



• What is the influence of the environment: child rearing and culture.

Essential reading

- Carver, C.S. & Scheier, M.F. (1996). Perspectives on personality. Boston, MA:
- Allyn and Bacon.
- Gleitman, H., Fridlund, A.J. & Reisberg, D. (1999). *Psychology (5th Ed.)*. New York: W. W. Norton & Company.

Practical

Objectives: Students are introduced to the administration, processing, and interpretation of questionnaires. Students are also acquainted with a few of the different methods of psychological assessment. The students will administer (parts of) tests/questionnaires and interpret the results. The tests considered in the practical are: the Groninger Intelligence Test (GIT) with practice on three of the nine subtests; the Thematic Apperception Test (TAT) and the Eysenck Personality Profiler (EPP), which the students will independently administer, score, and then discuss for those traits falling in the most extreme (1st or 10th) percentiles in a written report. The reliability and validity of the measurements will also be examined. Finally, the students will also become acquainted with the different modalities in which the psychological characteristics of individuals can be examined.

Instructional form

12 tutorial group meetings, 5 lectures, 2 practical meetings.

Examination form

Combination of 5 open and 50 multiple choice questions.

Course 1.7 History and Theory

May 21 - June 29, 6 ects

Course coordinator: Louis Boon, Neurocognition.

Objectives

Students learn how modern psychology emerged and has developed with regard to content, theories, and institutional practice.

Further description of the course

Many modern psychological ideas and institutions can be seen as successful solutions to prior problems. Conversely, there are a number of unsolved problems that have occupied psychology from the beginning. The history of both types of problems will be considered in this course although the emphasis will be on the unsolved problems. While the problems have remained unsolved, they are nevertheless the source

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of inspiration for a large amount of psychological research. Among the topics receiving consideration in this course will be:

- the content, social, and institutional causes of the scientific revolution;
- the emergence of psychology as a consequence of the emergence of the modern natural sciences during the scientific revolution;
- the mind-body problem as a consequence of the scientific revolution;
- the emergence and role of the experiment and laboratory research in the field of psychology;
- continuity between man and animal;
- are animals aware? do chimpanzees have a language capacity?
- the nature and role of human consciousness in human life and the field of psychology;
- what is cognitive psychology?

Essential reading

- Boon, L. (1982). Geschiedenis van de psychologie. Meppel: Boom.
- Various articles.

Practical

Objectives: Development of writing skills. Students must write an essay which should pertain to a topic considered in the lectures or the course literature. Students have a tendency, when they write about historical and/or philosophical problems, to be rather vague. The most important aim of the present practical is therefore to teach thestudent to clearly delimit a problem within the field of psychology.

Instructional form

12 tutorial group meetings, 6 lectures, 4 practical meetings.

Examination form

Open questions. Practical: an essay of no more than four pages.

1.2.2 Parallel program (Non-course related)

The parallel program includes components followed in a separate stream, independent of the course program. Maximum integration of the material and themes from the courses with the non-course related program is certainly attempted. The nature of the material in this parallel stream does not always lend itself to such integration, however. The non-course related program for the first study year includes the following components: Computer skills I, Statistics Ia and Ib, Research methods and techniques Ia and Ib, and Writing skills I.



Computer skills I

2 ects

Objectives

In the first year of computer instruction, the students acquire a basic knowledge of computer hardware and learn to work with the operating system Windows 95 and a number of the commonly used programs.

Further description of the program

A total of five training sessions are provided with each session covering a number of elements.

In the first training session, knowledge of the computer hardware, the operating system Windows 95, and the network is imparted. Grading of the training session is done on the basis of attendance.

In the second training session, students are introduced to the word processing program Word. During this training, the students are given the task of constructing their own sample document. Grading is based on approval of the reconstructed document by the practical leader.

During the third training session, the students learn to work with e-mail and the Internet. Grading is based on attendance.

The fourth training session is provided by the employees at the University Library. The students learn to work with the CD-ROM programs the University Library uses. The students also learn to search the psychological literature using the database PsychLit. Grading is based on attendance.

In the fifth training session, students acquire knowledge of the program Endnote. Grading is based on attendance.

Literature

To be announced.

Instructional form

The instruction will occur in the so-called computer resource center and the University Library.

Examination form The different training sessions are graded separately.

Statistics Ia and Ib

6 ects, coordinator: Nick Broers.

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Objectives

In the first year of study, the student is introduced to psychological research in a variety of forms. On the basis of research results, psychologists accept or reject all kinds of theories. They justify their decisions by referring to the data they collect and typically process with the aid of various statistical methods. In order to estimate the value of the claims of psychologists, a good understanding of statistics is thus indispensable.

Further description of the program

The statistical instruction during the basic study year is primarily conceptual in nature and aimed at teaching students to evaluate the significance of their research results. Calculation is less important than insight. The emphasis is on a broad introduction to a variety of topics.

Statistics Ia covers the following components:

- descriptive statistics;
- statistical relations;
- bregression analysis;
- elementary probability calculations;
- sample distributions.

Statistics Ib is aimed at:

- testing and estimating;
- a number of common applications, including the t-test and analysis of variance.

In addition, a brief introduction to the most commonly used statistical computer program – SPSS or the Statistical Package for the Social Sciences is provided together with practice on the program.

Literature

- Moore, D.S. & McCabe, G.P. (1988). *Introduction to the practice of statistics*. New York: Freeman and Company.
- SPSS manual.
- Stephenson, P., Rogness, N., Richie, J. & Stephenson, P. (1999). SPSS Manual for Moore and McCabe's IPS. New York: Freeman and Company.

Instructional form

15 lectures and 30 tutorial group meetings. In addition, practical sessions aimed at the use of SPSS (Windows).

Examination form

Separate examinations exist for Statistics Ia and Ib. Each examination consists of two sub-tests although the results of the two sub-tests can compensate for each other.



The examinations are closed book. Each sub-test consists of 15 multiple choice questions.

Research methods and techniques I

4 ects, coordinator: Fren Smulders, Experimental Psychology.

Objectives

In the conduct of psychological research, a number of different methods may be used: experiments, field observations, and questionnaires. In the basic study year, the student will become acquainted with the most important research methods used by psychologists. The methods are primarily introduced to give students a better grasp of the psychological knowledge that they already possess.

Further description of the program

- In the course of the basic study year, the following topics will be considered:
- the experiment;
- problems of control in experimental research;
- correlational research;
- quasi-experimental approaches;
- direct observation studies;
- use of tests and questionnaires;
- archive research;
- interviews.

Literature

- Goodwin, C.J. (1995). Research in psychology, methods and design. New York Wiley.
- Various articles.

Instructional form

In a separate course during the first half year, these topics will be studied in connection with six tasks. These tutorial group meetings are also supported by a number of lectures.

Examination form 30 true/false questions and 3 open questions..

Scientific theory

3 ects, coordinator: Rob de Vries, Neurocognition.

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Objectives

Scientists construct theories to understand and explain events. Predictions can then be made with the aid of these theories. The possibility of predicting also makes theories suitable for application to actual practice. The questions to be considered here are: What are scientific theories? How does science distinguish itself from non-science? What does scientific progress consist of and are there specific criteria for what constitutes scientific progress? How does the process of scientific reduction occur?

Further description of the program

The following notions will be considered in particular: scientific induction, falsification, the scientific paradigm of Kuhn; the research program of Lakatos; scientific reduction.

Literature

- Chalmers, A. (1981). Wat heet wetenschap. Meppel: Boom.
- Various articles.

Instructional form

5 tutorial group meetings, 5 lectures.

Examination form 5 open questions.

Writing skills I: Searching for references and writing an essay

3 ects, coordinators: Monique Doorschodt and Gerda Galenkamp, Neurocognition.

Objectives

Good writing skills are indispensable for both psychologists working in research and actual practice. One cannot start writing soon enough during one's study. With this in mind, a number of points at which the students can practice their writing skills are provided throughout the year.

Further description of the program

In the first half of the year, two training sessions are planned and, in an extension of these, an assignment. The first training is library training; you want to obtain material on the topic you intend to write about. The library training will familiarize you with how to do this in the library.

The second training is CD-ROM training within the framework of computer-aided instruction. Most of the important journals in the field of psychology are available on CD-ROM. With two of the databases, PsychLit and Medline, you will learn to search the psychological literature. The assignment accompanying the training consists of



looking up a number of references using the relevant databases and citing them in APA (American Psychological Association) format.

In the second half of the year, an essay will be written on a general psychological topic. A small number of relatively recent publications on the topic of interest will be discussed in the essay. It is the intention that the writing skills that were introduced in the first two training sessions be integrated into the essay. A lecture will also be presented to explain a number of things. In addition, the essays will be discussed. It is the intention that the students not only write the paper but also discuss the papers written by the students within the group. The paper from one fellow student must also be reviewed and reported on orally. That is, a brief summary of the paper (what is the problem? what is the conclusion? and how is the conclusion reached?) must be presented along with a number of questions on the paper.

In addition to the basic textbooks and library journals, a reader may be made available with photocopies of articles and book chapters otherwise not available. Your course instructor will have the reader. Furthermore, reference may frequently

1.2.3 Basic textbooks

A number of books are essential for instruction during the basic study year. The books have been selected by the instructors, and it is suggested that you purchase the textbooks yourself. It is possible to receive a discount on the purchase of textbooks, provided you are a member of the faculty's student association "Luna-tic" (see under General: Discount on books). For the basic study year, the following books are required reading.

- Gleitman, H., Fridlund, A.J., & Reisberg, D. (1999) *Psychology (5th Ed.)*. New York: W.W. Norton & Company.
- Carver, C.S. & Scheier, M.F. (1996). Perspectives on personality. Boston, MA: Allyn and Bacon.
- Goldstein, E.B. (1998). *Sensation and perception (5th Ed)*. Pacific Grove, CA: Bruce/Cole.
- Boon, L. (1982). *Geschiedenis van de psychologie*. Meppel: Boom.
- Goodwin, C. (1995). Research in psychology, methods and design. New York: Wiley.
- Chalmers, A. (1981). Wat heet wetenschap. Meppel:Boom.
- Moore, D.S. & McCabe, G.P. (1998). Introduction to the practice of statistics. New York: Freeman and Company.
- Stephenson, P., Rognes, N., Richie, J. & Stephenson, P. (1999). SPSS Manual for Moore and McCabe's IPS. New York : Freeman and Company.
- Pinel, J.P.J. (2000). *Biopsychology*. Boston: Allyn & Bacon.

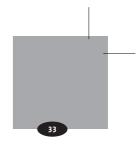
In addition to the basic textbooks and library journals, a reader may be made available with photocopies of articles and book chapters otherwise not available. Your course instructor wil have the reader. Furthermore, reference may frequently be made to literature available from the student resource center (usually multiple

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copies). It is important that these sources also be regularly consulted during the course of the basic study year.

1.2.4 Formative examinations

Formative examinations are tests intended to provide the taker with feedback on his/her level of knowledge. In contrast to summary examinations, such as the course examinations, decisions with regard to acceptable or unacceptable academic performance or passing versus failure are not made on the basis of the scores obtained on a formative test. The taking of a formative test is intended to be a study guide. By taking a formative test a few times during a course, it is possible for the student to see if he or she has studied sufficiently and whether his or her manner of studying appears to be appropriate. For each question, the student is confronted with certain subject matter and must reflect on the material in order to answer the question. Given that the student receives immediate feedback on every answer, the subject matter becomes better anchored in his or her memory and any misinterpretation is corrected. Given that the tests are done via a computer in one of the computer rooms, the student is also free to complete the tests whenever he or she wants.







2.1 GENERAL

The second study year encompasses two distinct periods: the first six courses constitute the first period and involve both a deepening and expansion of the knowledge acquired in the basic study year; the second period provides the student with an opportunity to devote him/herself to his or her own interests and select a possible major.

In the first year, the student was provided with an overview of the different disciplines within the field of psychology: social psychology, developmental psychology, differential psychology, and experimental psychology. Also, the biological, psychological, and cognitive processes that provide the foundations for behavior were considered. In a total of six courses in the second year, a number of broadly related themes will be considered — themes that will mostly make use of the knowledge acquired in the first year. The themes are selected in such a manner that the cognitive and biological-psychological perspectives are always essential.

Course 2.1 is devoted to the question of how human behavior (and the underlying cognitive and biopsychological mechanisms) emerged phylogenetically and just what the evolutionary function of such may be. In course 2.2, the extent to which the knowledge acquired in the first year can be used to explain and possibly help behavioral disturbances and experiences, will be examined. Course 2.3 is devoted to theories of human memory that do not consider memory to have an isolated function. In these theories, all such higher functions as learning, thinking, reasoning, judging, and imagining are integrated. This also holds for the theories derived from artificial intelligence and presented in course 2.5. Before consideration of these theories, however, course 2.4 will be followed. In this course, the structure, function, and evolution of one of the most important means of communication and mental functioning, namely human language, are examined. In course 2.6, human consciousness or the topic of philosophy, cognitive psychology, and biological psychology will be considered. Course 2.7 consists of a research practical.

The non-course related program consists of two statistical components. Furthermore, the writing instruction provided in the first year is continued with an emphasis on English language skills. This English training is primarily devoted to learning to write and speak in English. Finally, the non-course related program in the second year of study includes further computer skills instruction: an introductory course on programming in Delphi.

OVERVIEW YEAR 2

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2.2 OVERVIEW OF SECOND STUDY YEAR

Course Practical Additional study 2.1 Evolution and Behavior Research proposal Writing skills IIa Computer skills II (Delphi) 2.2 Psychopathology Complaint interview Writing skills IIa Computer skills II (Delphi)
Computer skills II (Delphi)
2.3 Memory Memory practical Writing skills IIa Computer skills II (Delphi)
2.4 Language Language research Statistics IIa Writing skills IIb (English)
2.5 Computing Statistics IIa Writing skills IIb (English)
2.6 Consiciousness Power point Statistics IIa Statistics IIb Writing Skills IIb (English)
2.7 Research practical

* On request only, courses in year 2 will be offered in English (this does not apply to courses in the parallel program).

2.2.1 Overview of the courses

Course 2.1 Evolution and behavior

August 28 - September 29, 6 ects Course coordinator: Harry Smit, Neurocognition.

Objectives

The purpose to this course is to:

• acquire basic knowledge of evolutionary theory;



- acquire basic knowledge of the genetic mechanisms that provide for natural selection;
- learn to think about behavior and psychological functioning in evolutionary terms;
- become familiar with the most important ideas with regard to the evolution of behavior and cognition.

Further description of the course

In psychology and the neurosciences, the central question is how behavior and brain functions arise. The question of "why" concerns the function of the behavior: How did a particular behavior, viewed historically, emerge in light of the evolution of the species?

In the lectures, practicals, and case analyses, the following topics will receive consideration:

- the state of the art with regard to Darwin's theory of evolution through natural selection;
- basic principles of population genetics; genetic variability;
- evolutionary explanations for such aspects of social behavior as altruism; game theoretic explanations such as "tit for tat";
- evolutionary explanations for sexuality and sex differences in behavior and cognition;
- the evolution of the brain and cognition;
- evolutionary explanations for the phenomenon of aging;
- evolution and health;
- improper application of evolutionary explanations.

Essential reading

- Buss, D.M. (1999). Evolutionary psychology: The new science of mind. Boston: Allyn & Bacon.
- Various articles.

Practical

Objectives: The practical consists of the writing of a paper in which you show that you can construct and apply a evolutionary-theoretically correct argument. How do you do this? A number of dimensions of behavior can be distinguished. One dimension is part of the living environment and conditions of man. The different dimensions can be distinguished from each other because they are relatively independent. That is, the knowledge and skills pertaining to one dimension. The assignment is to select a behavioral phenomenon and categorize the phenomenon under one or more dimensions. You must then provide your arguments for the behavior as such.



Instructional form 10 tutorial group meetings, 5 lectures, 1 practical meeting.

Examination form Open questions.

Course 2.2 Psychopathology

October 2 - November 10, 6 ects

Course coordinator: Brigitte Boon, Experimental psychology.

Objectives

After completion of this course, the student will be familiar with the most common behavioral disorders: the clinical picture and the diagnostic criteria, the etiological theories and empirical findings that either support or refute the theories, the current manner of treatment, and the effectiveness of the therapies.

Further description of the course

The course psychopathology is concerned with disturbed behavior. On the basis of case descriptions, such important clinical pictures as the different anxiety disorders, eating disorders, addictions, mood disorders, psychotic disorders, and psychoorganic disorders are studied.

The questions that will be raised continually during the course are: What is the clinical picture? Where is the boundary between normal and abnormal? What causes such a disorder? And what can be done about the disorder? As will be seen, there is a large gap between theory and practice, between scientific thinking and clinical treatment. A number of different theoretical schools will also be seen to exist, and these schools explain/treat behavioral disorders in keeping with their favorite theory. The choice of theory/treatment in most cases is thus based on ideology and not empirical findings, and the question is whether this situation is so desirable.

Essential reading Various articles.

Practical

Objectives: During the practical, the student becomes familiar with the conduct of an intake interview and establishment of a complaint inventory. Via role playing, interview techniques are practiced and students are given the opportunity to apply the techniques they have learned to simulated patients with different psychological disturbances. Grading is based on the acceptability of a paper.

Instructional form

12 tutorial group meetings, 6 lectures, 6 practical meetings of 3 to 4 hours each.



Examination form To be announced.

Course 2.3 Memory

November 13 - December 22, 6 ects Course coordinator: Peter Houx, Biological psychology.

Objectives

This course is intended to give the student insight into an integral and indispensable part of every information processing system: How does memory work?

Numerous qualitatively different forms of memory are needed to enable the wide range of cognitive functions that we continuously and effortlessly perform. The recollection of an experience from our youth imposes different demands on our cognitive system than finding our bicycle in a bike rack or finding the right word while speaking. In this course, the emphasis is placed on the role of memory in the processing of information. Attention will be equally paid to both cognitive and neurobiological theories of (cognitive) learning and memory. The cognitive processes that play a particularly important role in a normally functioning memory will also be considered: attention, planning, and (re)construction.

Further description of the course

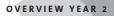
The course starts with a review of what was learned about memory in the course Human cognition. The standard memory model is contrasted to later insights, with the Working Memory Model of Baddeley receiving particular attention. The extent to which recent theories of brain functioning can lend further insight and plausibility to cognitive models of memory will also be raised. The student will be introduced to a few of the cognitive theories of learning, memory, and forgetting. As will be seen, neurobiological insights sometimes fit quite well with the cognitive theories and sometimes they actually counter the standard models.

Essential reading

- To be announced.
- Various articles, especially from: Neath, I. (1998). *Human memory: An introducation to research, data, and theory.* Pacific Grove, CA.: Brooks/Cole.

Practical

Objectives: During the practical, a number of tests stemming from the field of neuropsychology (e.g., the Wechsler Memory Scale) will be studied. The students will first practice the administration of the tests with each other, under the supervision of the practical coordinator. In addition, the students will be familiarized with a number of memory test paradigms, which make use of the computer: the Sperling task and



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levels of processing. Thereafter, that which has been learned is actually put into practice with at least three people of different ages: young, middle-aged, and old. The clinical neuropsychological tasks to be used are: 15 word learning test, Digit Span and Digit Span Backwards, Rey Complex Figure Test, bicycle drawing. Pairedassociated learning, and questionnaires concerned with meta-memory processes (MIA, CFQ).

The students must process their results and evaluate them in light of the clinical norms supplied to them in a test of clinical reporting.

Instructional form

12 tutorial group meetings, 6 lectures, 1 practical meeting.

Examination form Open questions.

Course 2.4 Language

January 8 - February 16, 6 ects Course coordinator: Rob de Vries, Neurocognition.

Objectives

To acquaint the student with linguistic research into the structure of language, psychological research into the functions (and dysfunctions) of language, and biological research into the evolution of the human language capacity and its position within the cognitive system. To acquaint the student with the particular vision of linguists and psycholinguists on the nature of the cognitive apparatus.

Further description of the course

The capacity to use language is one of the most important prerequisites for human social and cognitive functioning. Among the topics to be considered:

- the structure of language: the linguistic descriptions of the structure of our linguistic competence; the language acquisition device (LAD); the modular structure of our linguistic capacity (phonological, syntactic, and semanticconceptual modules); the difference between grammar as etiquette and grammar as a description of our linguistic knowledge system;
- language acquisition: language learning versus parameter setting, the naturenurture problem;
- language processing;
- language production;
- storage of language in the mental lexicon;
- a damaged and/or deficient linguistic capacity: genetic defects as the cause of a specific language disturbance;
- selective influence of brain damage on the different language modules (aphasia).



Essential reading To be announced.

Practical

Objectives: Within a few fractions of a second, people can understand or produce a spoken sentence. In doing this, information on the meaning and structure of words and sentences must be simultaneously processed and integrated. This practical is intended to acquaint you with on-line language processing with the aid of a psycholinguistic research technique, namely: shadowing. By manipulating the semantic and syntactic information in a spoken piece of text together with three other students, you will examine a number of the characteristics of language processing.

Instructional form 12 tutorial group meetings, 7 lectures, 3 practical meetings.

Examination form 10 open questions.

Course 2.5 Computing

February 19 - April 6, 6 ects Course coordinator: Herco Fonteijn, Experimental psychology.

Objectives

The purpose of this course is as follows:

- introduction to cognitive science;
- familiarization with the use of computational models in cognitive and biological psychology.

Further description of the course

Psychological hypotheses are increasingly specified in the form of computational models. The precision, transparency, and heuristic value of these models, on the one hand, and the availability of sufficient calculation capacity, on the other hand, have contributed to the popularity of these models. Cognitive psychological theories are increasingly leaning on symbolic architectures to characterize human problem solving, reasoning, and knowledge acquisition or on connectionist models to characterize aspects of human learning, categorization, perception, memory, and attention. Within the field of biopsychology, theories are currently developed and tested with the aid of models of the behavior of networks of neurons. In this course, a few of the influential architectures and algorithms will be discussed in connection with the various (bio)psychological phenomena that have given shape to them. Computational models of stereoscopic vision, facial recognition, the conditioning of fear,



prosopagnosia, chess, creativity, sadness, learning to walk, and the landing of an airplane will all be considered. In doing this, the student will also become acquainted with such critical undercurrents within cognitive science as situated cognition, artificial life, and dynamic system theory.

Essential reading

- Thagard, P. (1996). Mind. Cambridge, MA: MIT Press.
- McLeod, P., Plunkett, K. & Rolls, E.T. (1998). Introduction to connectionist modeling of cognitive processes. Oxford: Oxford University Press.
- Various articles.

Practical

The students will familiarize themselves with the relevant material by conducting a number of practical exercises.

Instructional form

12 tutorial group meetings, 6 lectures, audiovisual material, practical exercises.

Examination form

A combination of open and closed questions.

Course 2.6 Consciousness

April 9 - May 18, 6 ects

Course coordinator: Rob de Vries, Neurocognition.

Objectives

Further acquaintance with the newest cognitive and neuropsychological theories in the area of consciousness. Philosophical reflection on the caveats and problems associated with the notion of consciousness. Consideration of the relevance of consciousness for psychological practice.

Further description of the course

Consciousness, conscious experience, and perception were the most important topics of nineteenth-century psychology. With the rise of behaviorism, consciousness disappeared as a topic on the psychological agenda. Only over the past few decades has consciousness reappeared in psychology and neuropsychology, and consciousness is now viewed as one of the most important aspects of mental life. In this course, the material basis for and role of consciousness in mental life will be considered together with the philosophical problems associated with the relation between conscious experiences and the substantive processes that are the carriers of these conscious processes. Important questions and topics are: Is intentionality the hallmark of consciousness? Is consciousness a single entity or do split-brain patients



have two separate minds and thus a divided consciousness? Can we access the content of and processes underlying our consciousness via introspection? Are there important forms of mental processing, such as thinking and reasoning, that run unconsciously? What do such dissociation phenomena as blindsight tell us about the unconscious? Such special states of consciousness as dreaming and the different theories of dreaming will also be considered. Libet's research into the neurophysiological correlates of free will and the criticisms of this will be discussed. Furthermore, at the end of the course, the question of whether all this knowledge from psychology and neuroscience has brought us further in our attempts to unravel the brain-consciousness problem or not will be considered. In this connection, the newest views of the philosophers Colin McGinn and David Chalmers will be given consideration.

Essential reading Various articles.

Practical

Objectives: Students will learn to prepare and give a presentation on a topic covered in the course. To do this, the students will also make use of Power Point.

Instructional form 12 tutorial group meetings, 6 lectures, 3 practical meetings.

Examination form

10 open questions. Practical: prepare and give a presentation.

Course 2.7 Research practical

May 21 - June 29, 6 ects

Course coordinator: Anita Jansen, Experimental psychology.

Objectives

The aim of the course "research practical" is to supply the need for an intensive training in empirical research skills. The course includes all the things that are related to the practice of doing empirical research:

- the transformation of a general research question to the formulation of a hypothesis,
- making the hypothesis operational,
- designing the experiment,
- sampling the data,
- analysis of the data,
- interpretation of the results,
- writing a research report and presenting the research.

Further description of the course

The course will comprise a full 6-weeks course period in which students work in little groups (about 5 students a group) under the supervision of a researcher. The period will be closed with a conference during which lectures and posters are presented by the students themselves.

The global structure of activities is: week 1: Reading and formulation of the research question and hypothesis, week 2: Designing the research protocol. Making a plan for the statistical analysis and recruitment of subjects for participation, week 3: Measurements. Starting to write the report (introduction and method), week 4: Measurements and the analysis of data. Week 5: Analysis and interpretation of data, writing it up, and week 6: complete the report (introduction, method, results, discussion, like a "real" scientific article according tot APA-style) and present the research as a lecture and as a poster on the conference.

There are also weekly plenary lectures arranged about general research themes such as classic experiments in psychology, how to read and write a research report, coming from hypothesis to design, the relationship between design and statistical tests, pit-falls, and so on. There is also a literature file about these themes.

Essential reading Various articles.

Instructional form Group meetings, 6 lectures, closing conference.

Examination

Presentations, research reports and posters. Participation in a group is obliged.

2.2.2 Parallel program (non course related)

The non-course related program includes: Computer skills II, Statistics IIa and IIb, and Writing skills IIa and IIb (IIb is instruction in English). All of the components (with the exception of English) relate to the instruction in the first year. Statistics is presented parallel to courses 2.4 through 2.6. The Writing skills instruction starts at the beginning of the year and continues throughout the year. As part of the writing instruction, a "presentation" training program is organized in course 2.1. The Computer skills instruction runs parallel to courses 2.1 through 2.3.

Computer skills II: Introduction Delphi

⁴ ects, coordinator: Robert van Doorn, Experimental psychology.



Objectives

The second year of computer skills instruction consists of an introduction to programming. Students learn to think about problems in terms of algorithms and data structures, and they will indeed use the computer to solve these problems.

Further description of the program

By learning to program, students will investigate the black box that the computer still is for most people. Such insight is of critical importance for psychologists for a number of reasons. Cognitive psychologists, for example, can fulfill the important function of mediator between designers and end-users and must be able to communicate in the language of the designer. In addition, programming experience clarifies the analogy between man and computer, which has been the driving force behind theory formation in the field of psychology for quite some time now (see course 2.5, which connects up with the Computer skills instruction). In addition to the teaching of practical programming skills, it is attempted to instill a conceptual understanding of programming as well. Finally, the acquisition of such programming skills can also lead to a better understanding of word processors, database software, and other applications that all psychologists confront in daily practice.

Literature

Practical book.

Instructional form 5 lectures, approximately 8 obligatory practical meetings.

Examination form Different task assignments.

Statistics IIa and IIb

6 ects

Part IIa Coordinator: Nick Broers, Statistics

Objectives

In the second year, the student receives further training on the more complex statistical methods for data processing.

Further description of the program

In this part of the statistics training, considerable attention is devoted to such general linear models as regression analysis and analysis variance. Simple and multiple regression analysis, covariance analysis, model building, and the use of dummy vari-

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ables are all considered. In addition, one-way and multiple analyses of variance are also considered.

Literature

- Kleinbaum, D. G., Kupper, L. L., Muller, K. E., & Nizam, A. (1988). Applied regression analysis and other multivariable methods (3rd Ed.). Pacific Grove: Duxbury Press.
- SPSS Manual.

Instructional form

One lecture per topic, with an accompanying tutorial group meeting, a SPSS practical, and a workshop.

Examination form

20 multiple choice questions. One passes when 11 of the questions are answered correctly.

Part IIb

Coordinator: Gerard van Breukelen, Statistics

Objectives

Building on the information presented in Statistics Ia, Ib, and IIa on analysis of variance, the repeated measures analysis of variance for a continuous variable (such as reaction times or test scores) will be considered here. Two repeated measures designs are particularly common. In laboratory experiments, one frequently speaks of a within-subjects design: All of the subjects are observed under all conditions and thus measured repeatedly. In field experiments for the evaluation of a new teaching method or therapy, for example, one frequently speaks of a between-subjects design: Each individual is assigned to a single condition (such as intervention or control); but the dependent variable is repeatedly measured, for example, prior to intervention, after intervention, and one year later.

In this course, both designs will be considered. The objective is to teach students to recognize the designs and to properly analyze and interpret the data gathered in such a manner. The emphasis is on understanding the underlying statistical model and being able to translate the apparently complicated computer output into such familiar methods as paired and unpaired t-tests.

Further description of the program

The material covers three designs. The first is the one-way within-subjects design, the analogue of the one-way ANOVA but for cases where the same person is observed under all conditions. The second is the two-way within-subjects design, the within-subjects analogue of the two-way ANOVA. For both designs, two well-known methods of analysis will be practiced, namely the univariate (mixed model) methods and the multivariate (MANOVA) method. The sample distribution requirements



underlying the two methods will also be considered. The third design is the split-plot design for field experiments with repeated follow-up measures. This design includes both a between-subjects factor (intervention) and a within-subjects factor (measurement occasion) and also frequently a covariant (prior measurement).

Literature

- Lecture handouts.
- Girden, E. (1992). ANOVA repeated measures. Newbury Park, CA: Sage.
- SPSS Manual.

Instructional form

For each of the designs: a lecture, an tutorial group meeting on the theory and a pen and paper assignment, an SPSS practical, and a seminar in which the SPSS assignments are discussed. (This procedure is thus repeated three times.)

Examination form

Multiple choice questions, open book.

Writing skills IIa and IIb

8 ects, coordinators: Monique Doorschodt and Gerda Galenkamp, Neurocognition.

Objectives

The writing instruction in the second year builds on that in the first year. In the second year, two essays are written.

Part IIa: Presentation and essay, 4 ects

This course consists of the training of presentation skills and the writing of an essay on a general psychological topic. After completion of the essay, it is presented by the writer to the other members of the group and then discussed within the group. The essays are evaluated in the standard manner.

Part IIb: English and essay, 4 ects

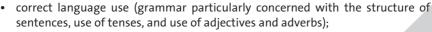
This course consists of:

- the development of scientific writing skills in English via the writing of short papers and research summaries;
- the expansion of one's English speaking ability with an emphasis on scientific presentation and discussion in English.

Objectives

The objectives with regard to writing pertain to five aspects of scientific writing:

 clarity (readability, clear aim, logical build up of the argumentation, meticulous justification, well-rounded conclusion);



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- punctuation;
- readability (use of key terms, provision of clear links between different topics, choice of active versus passive forms or impersonal form); and techniques for revision and lay-out

The objectives with regard to speaking concern:

- giving a presentation, and
- leading and participating in a discussion.

The emphasis in this course is on writing instruction in English as speaking is already addressed in courses 2.6 and 2.7.

Further description of the program

The intention is that popular scientific subjects be presented and discussed at the level of the non-expert and non-specialist.

The subject matter does not necessarily bear a direct relation to the topics from the relevant parallel course. The objective is to learn to speak, with particular attention to correct formal language use and the relevant vocabulary. In addition, attention is paid to how skillfully the students can answer questions and express themselves so that a better understanding and thereby a good discussion can be facilitated.

The students will be asked to write a number of short pieces during this course. The structure of the course is such that students can use their own written pieces to give a short presentation or lead a discussion within the tutorial group meetings. In addition, there is considerable space for feedback, adjustment, and development. The course is directed at the writing of a second year paper with guidance and feedback. In addition to the writing of this paper, it is also required that the student give a presentation on the basis of the paper.

Instructional form

Tutorial group meetings and feedback meetings.

Examination form

The paper is evaluated with regard to the content and the English, with both components counting equally. The presentation is also evaluated with regard to the content and the English. Both the paper and the presentation must be judged satisfactory.

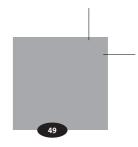
2.2.3 Basic tekstbooks

Similar to the first study year, the second study year also has a list of basic textbooks that should be purchased by the students. Provided one is a member of the faculty's student organization "Luna-tic," it is possible to purchase these books at a discount (see General).



- Buss, D.M. (1999). *Evolutionary Psychology: The new science of the mind*. Boston: Allyn & Bacon.
- Thagard, P. (1996). *Mind*. Cambridge, MA: MIT Press.
- McLeod, P., Plunkett, K. & Rolls, E.T. (1998). *Introduction to connectionist modeling of cognitive processes*. Oxford: Oxford University Press.
- Kleinbaum, D.G., Kupper, L.L. & Muller, K.E. (1988). *Applied regression analysis and other multivariable methods*. Belmont: Duxbury Press.
- Girden, E. (1992). ANOVA Repeated measures. Newbury Park. CA.: Sage.

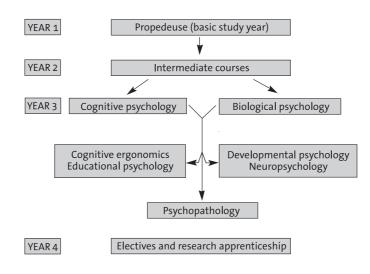






3.1 GENERAL

In the third study year, the students choose one of two possible directions for further study: biological or cognitive psychology. Within this direction, the students further specialize by choosing a specific major. The third year is constructed in such a manner that the first three courses (between September and December) consist of the basic courses for the general direction of specialization. The remaining four courses consist of courses from the student's major. In the direction of cognitive psychology, the possible majors are Cognitive ergonomics or Educational psychology or Developmental psychology. In addition, it is possible for students to follow, after completion of the basic program in either cognitive or biological psychology, part of the program from the mental health program (Geestelijke gezondheidkunde, GGK) within the Faculty of Health Sciences (for a major in Psychopathology).



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3.2 OVERVIEW OF THIRD STUDY YEAR

Course	2	Practical	Parallel program / additional study		
Basic courses Cognitive Psychology			During the whole year: Writing skills III		
3.1.a	Reasoning and decision making	Evaluating/critizising witness statements	Statistics IIIa		
3.2.a	Propaganda	Designing a flyer EMG-analysis	Statistics IIIa		
3.3.a	Multimedia	Designing a website	Statistics IIIb		
Cognitive ergonomics major					
3.4.1	Information design	Testing effectiveness of information carriers	Statistics IIIb		
3.5.1	Man-machine Interaction	Evaluate website	Computer skills III (Delphi)		
3.6.1	Traffic and aviation psychology	Develop workplace, environmental research	Computer skills III (Delphi)		
3.7.1	Macro- ergonomics	Ergonomic case studies	Computer skills III (Delphi)		
Educational psychology major					
3.4.2	Cognitive and social development	Testing social/emotional development	Statistics IIIb		
3.5.2	Knowledge acquirement	Problem design / problem solving	Computer skills III (Delphi)		
3.6.2	Instruction	Analysis of problem-solving skills evaluation training	Computer skills III (Delphi)		
3.7.2	Assessment, testing and evaluation	Evaluations of career advi- sors, test development	Computer skills III (Delphi)		
Basic courses Biological Psychology			During the whole year: Writing skills III		
3.1.b	Basic Neuroscience	Neuroanatomy	Statistics IIIa		
3.2.b	Neurocognition	Analysis and report of ERP and network simulation	Statistics IIIa		



3.3.b	Perception, imagery & the brain	Conduct and report of perception experiment and simulation experiment	Statistics IIIb		
Neuropsychology major					
3.4.3	Brain damage	Neuropsychological diag- nostics	Statistics IIIb		
3.5.3	Behavioral disorders	Intake and interview skills	Computer skills III (Delphi)		
3.6.3	Activation, arousal and psycho-pharmacology	Pyschophysiological measurements	Computer skills III (Delphi)		
3.7.3	Neuropsychology of aging	Learn to perform basic neuroscientific research	Computer skills III (Delphi)		
Developmental psychology major					
3.4.4	Infancy	Testing of reflexes and cognitive developmental level	Statistics IIIb		
3.5.4	Perception, attention and motor development	Clinical and neuropsycho- logical evaluation	Computer skills III (Delphi)		
3.6.4	Development of cognition and language	Administration of intelli- gence tests, experimental and psychological language research	Computer skills III (Delphi)		
3.7.4	Social-emotional development	Research with psycho- physiological measures of emotions	Computer skills III (Delphi)		
Psycho	pathology major		During the whole year: Writing skills III		
3.4.5	To be announced		Statitics IIIb		
3.5.5	Mood disorders	Intake interview, complaint inventory, experimental psychopathology	Computer skills III (Delphi)		
3.6.5	Anxiety	Behavior therapy: diagnosis and functional analysis	Computer skills III (Delphi)		
3.7.5	Sexuality	Acquire professional skills	Computer skills III (Delphi)		

3.3 THE DEGREE COURSE: COGNITIVE PSYCHOLOGY

3.3.1 Basic cognitive psychology program

In a number of courses in the first two years of psychology study, the students were acquainted with cognitive science, in general, and cognitive psychology, in particular. The knowledge acquired with regard to the different key cognitive psychological themes will be further deepened and applied during the third year program for the major direction of cognitive psychology. This initially occurs within the first three courses. Thereafter, the student is expected to choose one of the two possible majors within cognitive psychology: cognitive ergonomics or educational psychology. The first basic course, Reasoning and decision-making inside and outside the court of law, builds on our knowledge of human decision-making and reasoning. The reliability of the cognitive system and the operation of our memory are a few of the additional cognitive-psychological themes handled within the framework of this course. The course Propaganda, builds on the already acquired knowledge of perception, emotion, and computational models. Elements from communication science, social cognition, applied linguistics, semiotics, cultural psychology, consumer psychology, and religious psychology create a fitting framework for this course. In the course Multimedia, the themes of attention, language, and learning are accented. Those elements that reach across the different possible majors generally come from systems theory and information technology.

3.3.1.1 Overview of the courses

Course 3.1a Reasoning and decision making inside and outside the court of law

August 28 - September 29, 6 ects Course coordinator: Reinout Wiers, Experimental psychology.

Objectives

To gain:

- insight into theories of reasoning, reasoning errors, decisions, and decisionmaking on the basis of incomplete or "vague" information and the influence of (naive) mental models on reasoning and decision-making;
- knowledge of important paradigms for psychological research.

Further description of the course

In this course, attention is devoted to the themes of reasoning and decision-making with special attention to decision-making on the basis of incomplete, conflicting, or vague information decisions under conditions of uncertainty, the errors that people — both individuals and groups — can make during this process, and the pros and cons of decision-making support systems. The psychology of law will thus occupy a promi-



nent position in this course. The administration of justice is, after all, a domain where mistaken reasoning and decision-making can have very far-reaching consequences. Finally, the role of psychological expertise in jurisprudence will be considered within this course in part because the legal system is increasingly appealing to such expertise.

Essential reading Various articles.

Practical

Objectives: To acquaint the student with a number of methods for evaluating the truth of legal testimony. Topics: suggestibility, criteria-based content analysis (CBCA), and lie detection.

Instructional form 12 tutorial group meetings, 4 lectures, 3 practical meetings.

Examination form Open questions.

Course 3.2a Propaganda

October 2 - November 10, 6 ects

Course coordinator: Herco Fonteijn, Experimental psychology.

Objectives

To apply and deepen cognitive-psychological knowledge acquired in the first two years of study against the background of persuasion processes. To also gain the relevant knowledge from such related disciplines as social cognition, semiotics, and communication science.

Further description of the course

In this course, the products of individual and mass communication intended to influence the behavior of people will prompt us to study underlying cognitive processes in the heads of the sender and receiver. Among the subjects to be examined: models of mass communication; public relations and attitude change; the psychology of religion and attribution theory; language pragmatics; relevance theory and humor; perceptual psychology and text lay-out; inferences regarding the meaning of forms and compositions; symbols in semiotics and cognitive science; music and consumer behavior; emotions and esthetics. The emphasis will be on models of the relevant (social) cognitive processes. Thus, students will become acquainted with catastrophic-theoretic models of attitude and group polarization, relevance theory, and neural network models of visual attention and the recognition of musical patterns. *Essential reading* Various articles.

Practical

Objectives: Application of acquired knowledge in the design of a flyer or poster. Evaluation is based on the design and the accompanying report in which the choices that have been made are theoretically anchored.

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Instructional form

12 tutorial group meetings, 5 lectures, practical meetings, audiovisual materials.

Examination form

Open questions. The practical meetings are concluded with a report.

Course 3.3a Multimedia

November 13 - December 22, 6 ects

Course coordinator: Robert van Doorn, Experimental psychology.

Objectives

The purpose of this course is to acquire:

- knowledge of cognitive-psychological theories relevant for multimedia information presentation and multimodal information processing;
- knowledge of multimedia applications in the areas of education and communication;
- knowledge technological possibilities of multimedia.

Further description of the course

A recent development in the transfer of knowledge is the appeal to different sensory modalities via different media. In this course, the question of just how a multimedia product should be constructed from a cognitive-psychological viewpoint to exploit the possibilities of and limitations on the cognitive system of the user stands central. Basic psychological knowledge of the possibilities and limitations on the cognitive system in general and attentional processes in particular will be examined in the context of multimodal information processing. In doing this, the emphasis will be on the classic carriers of information requiring multisensory interaction with the user such as a figure with accompanying text. Also, on the basis of the construction-integration theory of Kintsch, students will determine which properties of texts contribute to a better understanding of the content. Thereafter, the technological possibilities for the multimedia presentation of information will be considered. Special attention will be paid to multimedia applications for the transfer of knowledge in the learning situation (for example, hypertext, Internet, and simulations).



Essential reading Various articles.

Practical

Objectives: The practical consists of an introductory course for the program Frontpage '97 (from Microsoft). Thereafter, students will work in small groups on the design, implementation, and presentation of a Website. The following skills stand central:

- working with the program Frontpage '98;
- application of cognitive-psychological guidelines for the design of a Website and the formulation/revision of an instructional text;
- presentation of the design.

Instructional form

12 tutorial group meetings, 4 lectures, 4 practical meetings, and 2 excursions.

Examination form Open questions.

3.3.2 The cognitive ergonomics major

Ergonomics attempts to have appliances, technical systems, and tasks designed in such a manner that the safety, health, comfort, and efficient functioning of people is promoted. This description makes clear that ergonomics is practice-oriented; that is, scientifically tested knowledge of human abilities and limitations are translated into practical guidelines and recommendations.

The origin of information is not bound to a single discipline but can come, in principle, from every relevant area of research. The interdisciplinary character of the field of ergonomics means that ergonomists tend to be psychologists, doctors, or engineers. Cognitive ergonomics can be construed as that branch of ergonomics concerned with the attunement of tasks, systems, and appliances to the cognitive system of man. In practice, this attunement is rarely based on (cognitive) theory and thus primarily on common sense tradition. A lack of attunement can lead to not only poor performance but also give rise to clear health and safety risks. The cognitive-ergonomist tries to design "user-friendly" tasks and systems that therefore optimally match the manner in which people perceive, decide, reason, learn, and solve problems.

In the first course, Information design (course 3.4.1), attention is paid to the cognitive-psychological assumptions behind the design and evaluation of such information carriers as operating instructions, warnings, forms, and pictograms. In the course Man-machine interaction (course 3.5.1), the interactions between.

people and machines stand central with a consideration of such matters as navigation, different search methods, and the use of metaphors. The third course, Traffic

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and aviation psychology (course 3.6.1), is aimed at the physical-ergonomic and anthropometric aspects of the design of workplaces and thus the question of how such individual related variables as fatigue, stress, and vigilance can be taken into consideration. Finally, in the course Macro-ergonomics (course 3.7.1), the attunement of the work environment to the possibilities and limitations of man is considered along with the research methods and techniques typically employed by cognitive ergonomists.

3.3.2.1 Overview of the courses

Course 3.4.1 Information design

January 8 - February 16, 6 ects Course coordinator: Remy Rikers, Experimental psychology.

Objectives

The purpose of this course is to:

- become acquainted with insights and findings from the area of "information design";
- acquire insight into the possibilities for applying cognitive-psychological knowledge and theories in the development of products, devices, etc.
- introduce methods and techniques for the development and evaluation of such information design products as operating instructions, warnings, forms, and displays.

Further description of the course

Information design is the interdisciplinary field in which cognitive-psychologists, ergonomists, applied linguists, and graphic designers tackle the question of how they can produce effective graphic communication aids, such as manuals, picto-grams, etc. After theoretical consideration of such cognitive-psychological

topics as planning, gathering of information, and affordances, a large number of examples will be used to illustrate the possibilities and limitations of using language, text, figures, and symbols as means of communication. Among the examples receiving in-depth consideration are: operating instructions for (complex) devices, warnings, tables and graphs, and pictograms. Attention will also be paid to instructional materials for the elderly. The student also becomes acquainted with the skills needed to evaluate and optimize the effectiveness of the aforementioned types of information carriers.

Practical

Objectives: Practical experience will be gained with different methods to evaluate the understandability of comunication aids. Students will conduct a task analysis,



design a product evaluation test, construct an error analysis, and become acquainted with the ecological approach of interface design.

Instructional form

12 tutorial group meetings, 4 lectures, 5 practical meetings.

Examination form Open questions

Course 3.5.1 Man-machine interaction

February 19 - April 6, 6 ects

Course coordinator: Robert van Doorn, Experimental psychology.

Objectives

The purpose of this course is to answer the following questions:

- How can the design of machines take the potentials and limitations of human information processing into consideration?
- What approaches are available to determine and optimize the usability of systems?

Further description of the course

Man-machine interaction constitutes an important new multidisciplinary area of work for cognitive psychologists. In this course, you will first be introduced to the most important theoretical and empirical approaches within the field. Of particular interest will be the possibilities and shortcomings of systems in relation to human information processing. The central question is how systems can be optimized to allow the interaction with people to run as naturally, efficiently, and effectively as possible. On the practical side, the methods and techniques for evaluating the usability of a system in a particular context with a specific target group will be examined and applied.

Essential reading

Various articles.

Practical

Objectives: Students will plan, conduct, and report on a self-designed and implemented (in course 3.3a) Website.

Instructional form

12 tutorial group meetings, lectures, practical meetings.



Examination form Open questions. The practical is concluded with a report.

Course 3.6.1 Traffic and aviation psychology

April 9 - May 18, 6 ects

Course coordinator: Jan Ramaekers, Experimental psychology.

Objectives

The purpose of this course is to gain:

- knowledge of cognitive psychological theories with applications from traffic psychology, aviation psychology, etc.
- knowledge of models and approaches from cognitive psychology with particular attention to such subject variables as fatigue and stress and such environmental variables as noise.

Further description of the course

Traffic and aviation psychology devote attention to the relations and interactions between people and their often non-natural environment. The most important theoretical themes considered in this course concern the ecological, energetic, and cognitive psychological models of task performance. Of primary concern are such non-natural environments as workplaces (including cockpits, control rooms, etc.), roads, and cities. Attention is devoted to the effects of fatigue, medication, noise, and temperature on human performance: on safety, risk management, and human errors; on the question of how people find their way in complex environments, and the cognitive aspects that play a role in the design of these non-natural environment. The themes in this context are, among others, dealing with natural and technological disasters.

Essential reading Various articles.

Practical

Objectives: Conduct, analyze, and report a comparative study of the effects of environmental noise on task performance.

Instructional form 12 tutorial group meetings, 4 lectures, 4 practical meetings.

Examination form Open questions.



Course 3.7.1 Macro-ergonomics

May 21 - June 29, 6 ects Course coordinator: vacancy

Objectives

The purpose of this course is to:

- acquaint the student with the content and practical aspects of the multidisciplinary approach that is often needed to gain insight into macro- ergonomic problems and topics;
- gain insight into the contribution that cognitive-psychologists can make to the attunement of the work environment in the broadest sense of the term to the abilities and limitations of man.

Further description of the course

Ergonomics has been traditionally aimed at the physical and cognitive-psychologicalabilities and limitations of the individual and the significance of these abilities and limitations for the development of interfaces, devices and workplaces. Problems in the work situation cannot always be traced back to the physical or cognitive limitations of the individuals, however. Practical experience shows that ergonomic interventions at such a "micro-level" are therefore not always successful.

In order to get a good picture of the functioning of individuals in a work situation and possible problems that may present themselves, social factors and characteristics of the organization should be incorporated into an ergonomic analysis in addition to the more traditional factors. This approach is referred to as "macro-ergonomics" and, within such an approach, the individual-work relationship is examined from a broad perspective and to some extent connected to the field of work and organization psychology.

In this course, the macro-ergonomic approach will be considered; among the topics to be studied will be motivation, system theory, situation awareness, safety, mental load, and stress.

As this course is the last one for a major in cognitive ergonomics, it will also be attempted to narrow the gap between textbook study, on the one hand, and research and practical recommendations, on the other, by presenting a number of cases to the students with the research methods and techniques standing central. Actual practice with the methods and techniques will be of major importance, which also means that the practical accompanying this course will weigh more than is usual for a course.

Essential reading Various articles.

Practical

Objectives: In an extensive practical, students will become acquainted with cognitive ergonomic practice and the research methods and techniques typically employed. Possible topics: ergonomic workplace analysis, formulation of a proposal for an intervention program or a research project, observational techniques.

Instructional form

6 tutorial group meetings, 5 lectures, various practical meetings.

Examination form

Open questions. The practical is concluded with a written report.

3.3.3 The educational psychology major

Education is an attempt to create an environment that stimulates human development; development of what people know, what they can do, and what they feel. Educational psychology examines these changes with a special emphasis on the effects of instruction on them. The point of view in Maastricht is strongly constructivist in nature (that is, learning is construed as a process of knowledge construction), aimed at learning in adequate contexts, and emphasizes the social character of learning. All of this is in line with the assumptions that characterize problem-based learning and also, thus, the extensive experiences of psychology students themselves.

The normal cognitive and social development of children and adolescents will be considered in the first course (course 3.4.2). In the second course, Knowledge acquirement (course 3.5.2), the processes that provide the basis for the acquisition of (declarative) knowledge will be examined along with an overview of educational methods. In the third course, Instruction (course 3.6.2), the transfer of (procedural) knowledge or skills will be examined. In the fourth course (course 3.7.2), the evaluation of educational achievement with particular attention to the testing of complex knowledge and skills in realistic settings will be at issue. Within this context, the closely related theme of the role of the psychologist in the examination of the academic aptitude and career preferences of children will also be considered.

3.3.3.1 Overview of the courses

3.4.2 Cognitive and social development

January 8 - February 16, 6 ects Course coordinator: Reinout Wiers, Experimental psychology.

Objectives

The purpose of this course is to provide an answer to the following questions:



Which processes constitute the basis for children's cognitive development? How does instruction influence this development?

Further description of the course

Children between their fourth and eighteenth years spend approximately 15,000 hours in school. In this course, the research concerned with the cognitive and social development in this period and how education can iinterfere in these from baby to young adult will be followed. For each period, the ongoing theoretical controversies will be examined along with their (possible) implications for education. In this connection, both regular education (e.g., science learning) and special education and education-related developmental problems (e.g., teasing) will be examined.

Essential reading

Various articles.

Practical

Objectives: The present practical has two objectives.

- To test an elementary-school child using the Theory of Mind (TOM) test; calculate the test scores; interpret the results; and report on the child to the teacher.
- To examine the structure of prior knowledge (naive theories) in a problem-based learning context.

Instructional form

12 tutorial group meetings, 6 lectures, 3 practical meetings.

Examination form To be announced.

Course 3.5.2 Knowledge acquirement

February 19 - April 6, 6 ects

Course coordinator: Henk Schmidt, Experimental psychology.

Objectives

The purpose of this course is to answer the following questions.

- How do people acquire declarative knowledge?
- What are the characteristics and specific requirements of learning by means of instruction?
- What are the different forms of instruction? More specifically: What are the characteristics of problem-based learning?

Further description of the course

Our knowledge of how people learn was, until recently, based on laboratory experiments in which subjects are asked to process simple materials such as lists of words under strongly controlled conditions. But how does someone gain an understanding of the history of Europe? Or interview techniques? The present course is concerned with these questions. The accent, in doing this, is primarily on the instructional methods that have been developed over the past few years on the basisof our increased knowledge of human cognition. Topics: Learning as the construction of mental models of reality; the origin and maintenance of misconceptions, particularly in the natural sciences; associationist perspectives on learning; intrinsic versus extrinsic motivation; learning from examples and learning to think and to solve problems; transfer of knowledge; the development of expertise in a variety of domains; and educational consulting.

Essential reading

Various articles.

Practical

Objectives: The practical accompanying this course has two parts. In the first part, students learn to construct tasks for a problem-based learning curriculum. In the second part, attention is devoted to thinking out-loud and protocol analyses. The objectives of this second part of the practical are:

- conduct a study of problem-solving with the aid of the thinking-out-loud method;
- formulation and elaboration of a coding scheme for a protocol analysis of the verbal protocols that have been collected;
- writing of a research report;
- and learning how this research method can be used to analyze the knowledge and skills of people.

Instructional form

12 tutorial group meetings, 6 lectures, 6 practical meetings.

Examination form

Open questions. The practical is concluded with a written report.

Course 3.6.2 Instruction

April 9 - May 18, 6 ects

Course coordinator: Wilco te Winkel, Experimental Psychology

Objectives

Knowledge about instruction design based on cognitive psychology theories and testing the instruction's effectiveness by means of experiments.

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Further description of the course

The main question in this course is how you can apply knowledge to shape education and learning. Basic principle of designing instructions are the knowledge and skills to be learned. Do you have to work with declarative knowledge or with procedural knowledge, or with a combination of both? The latter is the case in most cognitive skills that this course is dealing with. What does one has to know before one can actually execute a skill and how well and automatic does this have to happen? Answers to these questions are given in a task analysis.

Next steps are the determination of the instruction methods, the problems that are practised with, the sequence of problems and the form and timing of feedback. Some of the instruction methods that are dealt with, are:

- part-task practice versus whole-task practice;
- direct instruction versus discovering learning;
- inductive versus deductive learning;
- worked examples versus problem solving;
- self-explanations and reflection.

How effective are the different teaching methods? How can they be improved? In other words: is there a transfer of training and what are the optimal conditions for transfer? When does transfer appear to other tasks? Objective of this course is to be able to argument why specific choices are made in designing a learning environment, based on cognitive psychological theories and experimental research. Students will have to think of and perform an experiment themselves to find out how the method of reflection can stimulate learning.

Essential reading

Various articles and books available in the library.

Practical: Evaluation of the medical practical skills training in the Skillslab Objectives:

- to make a task analysis of a practical medical skill;
- on the basis of the task analysis, determination of the design principles for the training of the relevant skills;
- formulation of an observation scheme and observation of two training meetings;
- evaluation of the training and formulation of recommendations for improvement.

Instructional form

12 tutorial group meetings, lectures, 1 practical meeting.

Examination form

Combination of reports and 5 essay questions.

Course 3.7.2 Assessment, testing and evaluation

May 21 - June 29, 6 ects

Course coordinator: Marianne van de Hurk, Statistics.

Objectives

The objectives of this course are as follows.

Knowledge of and a critical approach to the criteria and methods for the evaluation of course participants. What criteria and methods are there? To what extent are these evaluation methods scientifically supported, reliable, valid, and manageable?

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Further description of the course

This course is concerned with evaluation within the educational context, both the evaluation of the course participants and the teaching. The relevant questions are, for example: What is the predictive value of tests and questionnaires for the advising or selection of the tested people with regard to their further education or profession? What is the predictive value of examination results? Are simulations of professional situations more appropriate? How can computerized tests and evaluations contribute to the speed, objectivity, and reliability of evaluations? Should teaching be considered good when the participants are satisfied at the end, when the percentage of the participants passing is high, or when the information that is learned can be applied in the work of the participants?

To what extent do student and teacher place responsibility for (negative and positive) results with themselves? What does the total score from a test or questionnaire say about the relevant individual when the items on the measurement instrument constitute a multidimensional or heterogeneous collection? How can tests and evaluations be normed? Should examination scores be judged using absolute or relative norms? Should test scores simply be connected to age and sex or are other personality characteristics more relevant? How should differences in cultures, milieus, cohorts, or generations be dealt with? How can feedback on the questions being evaluated lead to improvement? How can students learn from their mistakes on multiple-choice questions? What do teachers learn from their scores on the rating scales included in the educational evaluations? What remaining feedback is needed? Which criteria should be followed during evaluation, and who has the right to evaluate? Should society have a say in the evaluation of students and training programs? Is the customer always right? And just who is the customer? On the basis of a number of tasks, the preceding and a number of other questions will be considered. It is possible that a small practical on test administration and scoring may also be added.

Essential reading Various articles.

Practical

Objectives: Among the objectives of the practical are the following:



students design a series of stations for the evaluation of future career advisors;
 students develop an "authoritic test" for this course including guidelines for eval

 students develop an "authentic test" for this course, including guidelines for evaluation and a reliability study.

Instructional form

12 tutorial group meetings, 6 lectures, 6 practical meetings.

Examination form

Open questions. Practical is concluded with a written report.

3.4 THE DEGREE COURSE: BIOLOGICAL PSYCHOLOGY

3.4.1 Basic biological psychology program

The on-going biological revolution in psychology (comparable to the preceding cognitive revolution) is of overriding importance for the present-day "face" of psychology. Within the field of biological psychology, "man as information processing system" stands central, which means taking biological factors into consideration in the study of the psychological or cognitive functioning of man. The manner in which we perceive, remember, speak, and move is determined by, among other factors, the operation of the nervous system and the phases of development. Information is often processed very differently by a computer than by people; similarly, toddlers have different cognitive skills than older children and adults. Following the three basic biological psychology courses, students choose a major in

neuropsychology or developmental psychology courses, students choose a major in aimed at the study of brain-behavior relations and the application of such information to problems related to health and cognitive functioning. A major in developmental psychology is aimed at the study of changes in biological and cognitive-emotional functioning throughout the lifespan.

3.4.1.1 Overview of the courses

The three basic courses of biological psychology build on the basic knowledge acquired in the first and second years of study and offer a structured program to acquire the basic knowledge needed to major in either neuropsychology or developmental psychology. In the first basic course, Basic neuroscience, the student is immersed in the functional anatomy, physiology, and plasticity of the nervous system. In the second basic course, Neurocognition: theory and methods, the most important research methods within the cognitive sciences and their connections to theory formation will be treated. In the third basic course, Perception, imagery, and brain, an extended demonstration of the multidisciplinary approach to theory construction within the field of biological psychology will be provided.

Course 3.1b Basic neuroscience

August 28 - September 29, 6 ects Course coordinator: Wijnand Raaijmakers, Neurocognition.

Objectives

Acquire knowledge of and insight into:

- the structure and operation of the nervous system;
- the organization of the most important functional systems that provide the basis for perception, movement, emotion, and motivation;

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• neural plasticity and recovery of function.

Further description of the course

The course is built up around a few central themes. On the basis of the development of the nervous system, a few general organizational principles will be discussed, including the visual system in particular. A second theme is sensory-motor integration, with the neural organization of the somatosensory and motor system occupying a central position along with the manner in which movements and the planning of behavior arise. A third theme concerns the neurobiology of emotion and motivation. The anatomy of the limbic system constitutes the starting point for the study of the neural organization of such emotions as fear and such motivational systems as reward. The last theme concerns the relation between the plasticity of the nervous system and recovery of function.

Essential reading

- Various articles and chapters from different books.
- Bear, M.F., Connors, B.W., & Paradiso, M.A. (1996). *Neuroscience. Exploring the brain.* Baltimore etc.: Williams & Wilkins.

Practical

Objectives: The most important objectives in this practical are becoming familiar with neuroanatomical terminology and gaining insight into the spatial and functional organization of the brain. The practical meetings are very well-suited for this: the preparation of structures in sheep brains, the study of brain patterns under the microscope, and a demonstration with human brain material. Assignments to be performed with the aid of brain models, CD-ROM programs, and textbook information will also be given.

Instructional form

10 tutorial group meetings, 8 lectures, 5 practical meetings.



Examination form

The course test consists of open questions. The practical is concluded with a report evaluated along a ten-point scale; this evaluation also counts towards the final evaluation for the course.

Course 3.2b Neurocognition

October 2 - November 10, 6 ects Course coordinator: Leo Blomert, Neurocognition.

Objectives

The purpose of this course is to introduce:

- the theoretical approaches within the cognitive neurosciences;
- the methods and techniques within the cognitive neurosciences.

Further description of the course

The goal of the cognitive neurosciences is to gain insight into the manner in which our brain enables cognitive functioning. This relatively new area of science is per definition interdisciplinary and makes use of concepts and methods from the cognitive sciences, neurosciences, cognitive neuropsychology, and computer sciences. None of the approaches has primacy, and each contributes to a dynamic interaction between diverse knowledge sources.

The cognitive neurosciences provide a bridge between the functional and neuralarchitecture of human cognition. This has been made possible by breakthroughs in neuroscientific research but also predominantly through the development of imaging techniques for the study of brain activity in connection with cognitive processes in both healthy and brain-damaged subjects. Various electrophysiological, metabolic, and electromagnetic methods have become essential for the testing and refinement of our theoretical models of cognitive functioning. Functional neuro-imaging techniques constitute an important supplement (and correction) to lesion research and have developed themselves into an indispensable tool for theory formation and testing. Equal attention will be paid within the present course to the merits and fundamental methodological and conceptual problems associated with these methods.

In addition to the experimental approach, the development of computational models has also made an important contribution to the cognitive neurosciences. PDP and connectionist models are used to develop and test hypotheses regarding information processing in populations of neurons, normal cognitive systems, and brain-damaged cognitive systems.

The dynamic interaction between theory and method development will also be critically evaluated in light of research on the themes of working memory, language, and motor behavior.

Essential reading

 Ruggs, M. (Ed.), (1997), Cognitive neuroscience. Sussex: Psychology Press (paperback).

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Various articles.

Practical

Objectives: Participation in, analysis of, and reporting on: 1) a topographic ERP experiment and 2) a network simulation of a population of neurons.

Instructional form 12 tutorial group meetings, 6 lectures, 2 practical meetings.

Examination form Open questions

Course 3.3b Perception, imagery, and the brain

November 13 - December 22, 6 ects Course coordinator: Leo Blomert, Neurocognition.

Objectives

To acquire knowledge of:

- theories of higher-order perception and mental imagery;
- the neurobiological organization of perceptual and imagery processes.

Further description of the course

In this course, you will first be acquainted with the assumptions and concepts that lie at the foundation of current theories of cognitive representation and organization. Thereafter, a model of higher-order visual perception will be developed step by step. Visual mental images are assumed in current theory to be part of the ingredients for normal perceptual processing. The attention paid to visual processes is complemented by the introduction of such key concepts as auditory perception and imagery. The starting point for the proposed explanatory model is the intrinsic relation between cognitive skills, cognitive processes, and the brain. Every new component of a theory will be introduced and supported with experimental research results. Given that perception and mental imagery are, in the end, a consequence of neural activity, the brain circuits that enable these functions will also be examined on the basis of various neuropsychological and functional brain activation (neuro-imaging) studies. Conversely, the (re)interpretation of neuropsychological findings in light of the models of perception and imagery being developed will be seen to provide surprising new insights into otherwise familiar clinical symptoms and syndromes.



Essential reading

- Kosslyn, S.M. (1996). Image and brain. Cambridge, MA: MIT Press (paperback).
- Various articles.

Practical

Objectives: The conduct of: 1) a visual perception and imagery experiment, 2) a simulation experiment, and 3) the writing of a report on both of these experiments.

Instructional form 12 tutorial group meetings, 6 lectures, 2 practical meetings.

Examination form Open questions.

3.4.2 The neuropsychology major

The major in neuropsychology is for people who are interested in the connection between body and behavior (i.e., the brain and behavior). Most neurospsychologists work in the area of evaluating the functional disturbances in patients with brain injury or patients with some other behavioral disorder and thus as so-called test psychologists. Neuropsychologists may also be involved in rehabilitation or the training of cognitive skills and in research (for example, within the pharmaceutical industry or university research laboratories).

The main theme of the major in Neuropsychology is psychological functioning and the biological aspects of it. In the first course, Brain injury, the most important functional disturbances resulting from brain injury will be considered. In the second course on Behavioral disorders, disorders in perception and behavior will be examined along with the relevant psychotherapeutic and pharmacological interventions. In the third course, Activation, arousal, and psychopharmacology, the relation between alertness and cognitive performance, on the one hand, and the relevant physiological and pharmacological brain processes, on the other hand, will be addressed in particular. Finally, in the fourth course, Neuropsychology of aging, the cognitive and emotional changes that occur during normal aging will be considered along with the neuropsychological functional disorders that accompany different forms of pathological aging.

3.4.2.1 Overview of the courses

Course 3.4.3 Brain damage

January 8 - February 16, 6 etcs Course coordinator: Martin van Boxtel, Psychiatry and Neuropsychology.

Objectives

This course aims to provide the student with knowledge of brain-behavior relations by examining the disturbances in psychological functioning that occur in connection with brain injury. The goal in the end is that the student gain insight into the taxonomy of the most important neuropsychological syndromes.

Further description of the course

Much of our knowledge of cognitive and affective functioning and behavior has been gained through analyses of changes following brain injury. In the present course, the functional disturbances that occur following focal damages in the different parts of the cerebral cortex, connective tissues, and in the limbic and other subcortical brain parts will be examined. The emphasis is on gaining insight into mechanisms. The course starts with a discussion of the general effects of brain injury and the different causes of brain injury. Thereafter, the general and specific dysfunctions with regard to psychological functioning are discussed in connection with injury at the level of the brain stem, diencephalon, and ascending fiber system. Dysfunctions after injury in the posterior neocortex are examined next in relation to perception, spatial orientation, and language. Dysfunctions after injury in the anterior neocortex are discussed in connection to changes in the planning and steering functions. Memory disturbances and affective functions are considered in relation to injuries to the limbic system. Upon completion of this course, the student will have an overview of the functional brain anatomy, brain physiology, and the specific relation between brain structure and psychological functioning. The student is also then familiar with the mechanisms that provide the basis for brain plasticity and regeneration and with the key principles underlying functional recovery after brain injury.

Essential reading

- Kolb, B. & Whishaw, I.Q. (1995). Fundamentals of human neuropsychology. New York: W.H. Freeman and company.
- Various articles.

Practical

Objectives: The practical on neuropsychological diagnosis is aimed at obtaining the skills needed to conduct and report a neuropsychological examination for screening purposes. The practical involves four half days in which the student practices the conduct of neuropsychological test research and immerses him/herself in the different methods for screening and deeper neuropsychological diagnosis. In the practical, the accent lies on the interview with the patient, the interpretation of test results, and the writing of a neuropsychological report on the basis of examination, interview, and observational information. Among the diagnostic methods to be considered are: the Groninger Intelligence Test (GIT), the 15-word learning task, the Complex figure from Rey, the Stroop color-word test, and the Concept Shifting Test.



Instructional form 12 tutorial group meetings, 6 lectures, 4 practical meetings.

Examination form Open questions.

Course 3.5.3 Behavioral disorders

February 19 - April 6, 6 ects

Course coordinator: Harald Merckelbach, Experimental psychology.

Objectives

This course is intended to impart knowledge about the cognitive dysfunctions that accompany severe neuropsychiatric and neurological disorders and to provide insight into the biological mechanisms and intervention possibilities for these disorders.

Further description of the course

The course is concerned with the changes in psychological functioning that occur in connection with a number of frequently occurring brain disorders.

The intention is to gain insight into the characteristic manifestations of behavioral problems and cognitive functional disturbances along with the brain and behavioral mechanisms that lie at the foundation of these. The emphasis in this course is on the problems associated with such neuropsychiatric phenomena as schizophrenia, compulsive symptoms, epilepsy, and mood disorders. The neuropsychiatric problems associated with a number of the neurological phenomena important for psychologists will also be considered. Attention will be paid to the psychological problems associated with cerebrovascular disturbances and light brain trauma. With respect to the mechanisms that lie at the basis of behavioral and cognitive disorders, both the relevant biological and psychological factors will be considered.

Essential reading

Various articles and chapters from different books.

Practical

Objectives: The practical attempts to provide students with the skills needed to conduct an intake interview in cases of neuropsychiatric disorders. Both the general interview (problem inventory, history, psychosocial factors) and the special neuropsychological anamnesis will be practiced. Use will be made of simulation patients. The practical is concluded with a report, which will be graded on a satisfactory/unsatisfactory basis.



Instructional form 12 tutorial group meetings, 6 lectures, 3 practical meetings.

Examination form Open questions.

Course 3.6.3 Activation, arousal, and psychopharmacology

April 9 - May 18, 6 ects

Course coordinator: Wim Riedel, Psychiatry and Neuropsychology

Objectives

The purpose of this course is twofold:

- to deepen one's knowledge of the relation between the degree of vigilance or alertness and cognitive achievements and also the neurophysiological and neuropharmacological processes in the central nervous system involved in the regulation of vigilance and alertness;
- to gain knowledge of the relation between disturbances in the regulation of vigilance (as a result of, for example, working nights or the use of pscyhopharmaceuticals) and accidents (human factors).

Further description of the course

Numerous notions are available in the psychological literature to describe the human vigilance function: activation, arousal, effort, inhibition, vigilance, alertness, sustained attention and selective attention. Intensity of attention refers to the so-called energetic processes needed for the processing of information. At the behavioral level, these energy processes can be divided according to their position in the information-processing chain. With arousal, stimulus-related alertness is meant; with activation, response readiness is meant. Effort is the connecting link and refers to conscious attention. In addition to this, there is also an inhibitory system. At the pharmacological level, these processes are predominantly steered by noradrenaline, dopamine, acetylcholine, and serotonin, respectively. At the neurophysiological level, the circuits for all these systems begin low in the brain and project diffusely through the cortex. In this course, considerable attention is paid to how the psychopharmaceuticals with a working mechanism in one of the aforementioned neurotransmitters influence human behavior. On the one hand, the use of psychopharmaceuticals to study behavior and cognitive processes and, on the other hand, the use of psychopharmaceuticals to gain insight into the (side) effects of psychoactive substances will be of interest.

In addition, attention will be paid to the neurophysiological regulation of vigilance and how this is associated with the regulation of such autonomous processes as heartbeat and breathing. This relation provides us with psychophysiological



measures to examine human vigilance or alertness in such actual practice situations as traffic.

Essential reading

• Various articles and chapters from different books.

Practical

Objectives: To acquire experience with the experimental influence of arousal via task variables and/or pharmaceuticals; the conduct of psychophysiological measurements used to indicate arousal and activation; and subjective indicators of activation and arousal.

Instructional form 12 tutorial group meetings, 6 lectures, 4 practical meeting

Examination form Open questions.

Course 3.7.3 Neuropsychology of aging

May 21 - June 29, 6 ects

Course coordinator: Peter Houx, Biological psychology.

Objectives

This course is intended to provide the student with knowledge of the cognitive, emotional, and behavioral changes that occur during normal aging. Knowledge will also be acquired of the neuropsychological functional disorders that can occur as a result of pathological forms of aging and the biological and psychosocial mechanisms that lie at the basis.

Further description of the course

Many of the elderly complain about their cognitive functioning, and a decline in many cognitive processes with the climbing of the years can also be objectively demonstrated. Starting in the fourth decade, a clear slowing down can already be detected. Considerable differences nevertheless exist in the degree of decline in cognitive functioning and skills across people. Some people become "successfully" old; others encounter functional disorders that can considerably hinder daily life. Severe changes can also occur, such as those accompanying pathological forms of senility. The different forms of dementia and different neuro-psychiatric syndromes are also an example of this. The present course will provide an overview of which psychological "modules" deteriorate as part of the normal aging process from the age of 25 on and what happens during pathological forms of cognitive aging. Important questions will thus be: just when do changes occur and just how rapidly? The

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emphasis will be on neuropsychology and cognitive gerontology along with the connections between the biological, psychological, and social factors during the process of aging. The relative contribution of the aforementioned factors changes with the phase of life. Physiological theories of aging will be considered (such as genetics, free radicals theory, and the brain reserve theory). Neuropsychological disorders will be studied in relation to neuropsychiatric and neurological syndromes. Dementia and Alzheimer's in particular, Parkinson's disease, age-related cognitive disturbances, anxiety, and depression among the elderly will all be considered. Both diagnostics and classification as well as the biological and psychological forms of treatment/care will be discussed in this connection. Various cognitive theories will also be considered: Is it predominantly declining speed that is responsible for the objective and subjective deterioration, or is it actual deterioration of the senses? What measurable cognitive dysfunction precedes a memory problem or complaint? Various social and cultural influences in addition to the role of health problems will also be discussed.

Essential reading

Articles and chapters from different books.

Practical

Objectives: The Maastricht Aging Study (MAAS) is intended to, among other things, establish norms for a number of clinical (neuro)psychological tests and tasks. The tasks are administered in a standard manner to well-documented and stratified panels of normal subjects between the ages of 25 and 85 years. Pairs of students are presented a data set with one or more of the tasks. Every pair receives a different data set and question. The statistical analyses are performed independently under the supervision of the practical coordinators (effects of age, sex, educational background, and health status). Norm tables are created. And critical discussion in light of the relevant literature provides the basis for a report.

Instructional form

12 tutorial group meetings, 6 lectures, 4 practical meetings.

Examination form Open questions.

3.4.3 The developmental psychology major

A major in developmental psychology is relevant for students who are interested in working with, psychologically evaluating, and treating children, adolescents, and the elderly. A significant percentage of the developmental psychologists are concerned with the possible causes and consequences of behavioral changes during the life course. Within this context, one may think of determining the level of development



and making a prognosis for later potential consequences. These developmental psychologists work primarily in the areas of education, educational advising, public relations, and in policy functions. When the emphasis lies more on disturbed development, then the developmental psychologists work primarily in the areas of health care, mental health care, care for the mentally handicapped, etc. In addition to these options, developmental psychologists may also be involved in university and/or industrial research.

The developmental psychology program at Maastricht University is concerned more than the developmental programs elsewhere with the connections between the biological and psychosocial aspects of behavior. In the first course, The baby, the relations between biological and psychological factors during early development will be discussed along with the influence of these factors on later development. In the second course, Perception, attention, and motor development, normal and pathological changes in perception, attention, and the motor system throughout the course of life will be considered. In the third course, Development of cognition and language, both the normal and disturbed courses of development for the cognitive capacity and language will be considered. In the final course, Social-emotional development, precisely such development will be considered. In all of the courses, attention will be paid to not only the biological mechanisms and theories of development but also to the evaluation, research, and treatment of developmental disorders.

3.4.3.1 Overview of the courses

Course 3.4.4 Infancy

January 8 - February 16, 6 ects

Course coordinator: Hans Stauder, Neurocognition.

Objectives

This course is intended to provide insight into the current state of the art with respect to the biological and behavioral processes that influence early human development. At the same time, the influence of the early course of development on later development will be examined.

Further description of the course

Early development is the most dynamic period of human ontogenesis. Given the special characteristics of research into early human development, this course has a format that deviates from that of the other courses within the developmental psychology major. In contrast to the other courses with their life-span orientation, the theme of the present course is the very earliest developmental phase. This does not, however, mean that the relation between early and later development will not be an issue. As will be seen, apparently insignificant endogenous (genetic) factors and/or environmental factors can considerably influence the further development

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of an individual. Early development is nevertheless characterized by a very large degree of plasticity with regard to both physiology and behavior. The removal of a complete brain hemisphere during the early phases of development, for example, need not lead to later disturbed development.

Among the topics to be considered are: brain-behavior relations during early development, inborn reflexes that later disappear, effects of drug use by the mother on the baby, the question of what infants perceive and know, leaps/discontinuity in early development, and the boundaries between normal and abnormal early development. In addition to the basic textbook, a number of recent articles will also be required reading.

Essential reading

- Bremner, J.G. (1994). Infancy. Oxford, UK: Blackwell.
- Various (recent) articles.

Practical

Objectives: To acquire experience with the evaluation of infant reflexes and determination of the cognitive developmental level of babies and young children with the aid of Bayley's developmental scales.

Instructional form

12 tutorial group meetings, 4 lectures, 2 practical meetings.

Examination form Open questions.

Course 3.5.4 Perception, attention, and motor development

February 19 - April 6, 6 ects

Course coordinator: Lisa Jonkman, Neurocognition.

Objectives

This course is intended to provide an overview of the human development of perception, attention, and motor functions from early to old age. The emphasis is on normal development. The most important disturbances of perceptual, attentional, and motor functions will be examined in relation to the normal course of development.

Further description of the course

Although perception, attention, and motor development change most spectacularly during the baby years, these functions are subject to change throughout the life span. In considering the relevant theories within the present course, the emphasis will be on the biological and physiological models of development. As will be seen, a disturbance in one or more of these functions can have very different consequences,



depending on the age at which the disturbance occurs. Being born deaf is very different, for example, than becoming deaf at a later age. During this course, it will be quickly seen that developmental theories of perception and the motor system are inseparable from attention and the development of attention.

The most important disorders related to perception, attention, and the motor system will be considered and placed within a developmental perspective. As will be seen, the examination of disturbances from a developmental perspective can provide some surprising insights. Hypotheses have been developed, for example, with regard to brain activation and perceptual disturbances that appear to constitute the basis for the development of autism. Such topics as the development of "bottom-up" versus "top-down" attentional processes, the development of inhibition and the frontal cortex, the development of motor functions, ADHD and Parkinson's disease, and the development of smell, taste, auditory, and visual perception will also be considered.

Essential reading To be announced.

Practical

Objectives: To acquire experience with the clinical and neuropsychological evaluation of executive functions in children and adults. In the practical, particular attention will be paid to the different experimental and psychophysiolgocial research designs used to evaluate these functions.

Instructional form

12 tutorial group meetings, 4 lectures, 2 practical meetings.

Examination form Open questions

Course 3.6.4 Development of cognition and language

April 9 - May 18, 6 ects Course coordinator: Erik van Loosbroek, Neurocognition.

Objectives

To obtain insight into the development of cognition and language throughout the life course with an emphasis on the underlying biological mechanisms. Disturbances of cognition and language development will be considered in relation to the normal course of development.

Further description of the course

Cognition and language have in common that they both develop for the most part after birth and are therefore strongly influenced by cultural factors and the environment. Cognition and the development of language also show a special relation during particular developmental periods.

A strong correlation exists around 2-3 years between the development of language and important changes in the memory and thinking of children, for example. Intelligence is a central notion in the study of cognition, and many (developmental) psychologists are confronted with the notion in actual practice. In the present course the following questions will be considered with regard to intelligence: the theory and development of hypothetical-deductive thinking and the cultural aspects of intelligence; changes in the predictive value of IQ during development; and the relation between intelligence and the brain. In addition, attention will be paid within the present course to the extremes along the intelligence distribution: When is someone highly gifted, and how does this manifest itself at an early age? What forms of mental handicap can be distinguished, and how do these manifest themselves at an early age?

While the basic cognitive and linguistic functions develop during infancy, they only manifest themselves in more or less adult form towards the end of childhood. The result of this delayed development is cognitive and communicative capacities without an equal. During development, one can speak of not only an increase in general processing speed but also qualitative information-processing changes that appear in some cases to occur in a stepwise manner. During normal aging, one can also speak of a decrease in processing speed but it is not yet clear whether qualitative changes also occur. In our consideration of the many theories of cognitive and linguistic development, the emphasis will be on those models with biological or physiological implications.

Essential reading

- Various scientific articles.
- Chapters from different books.

Practical

Objectives: To acquire practical experience with the selection, administration, and evaluation of intelligence tests for different age groups. Use will be made of the following tests: Raven's Progressive Matrices, SON-R 2, 5-7, PEP, and the WISC-R. In a second practical, attention will be paid to experimental and psychophysiological language research.

Instructional form

12 tutorial group meetings, 4 lectures, 2 practical meetings.



Examination form Open questions.

Course 3.7.4 Social-emotional development

May 21 - June 29, 6 ects Course coordinator: Harry Smit, Neurocognition.

Objectives

This course is intended to provide a picture of social and emotional development from infancy to old age. The emphasis is on biological development theories with regard to the effects of disturbed early development on later social-emotional development.

Further description of the course

Despite the fact that most people recognize the importance of social-emotional development, it is nevertheless not easy to operationalize and/or measure the social and emotional aspects of development. There are no standard intelligence tests that measure social-emotional intelligence, for example. In contrast, the literature contains descriptions of very divergent forms of social-emotional development. In the present course, the following themes will be considered: the relation between the brain and the development of consciousness, the development of friendship relations, moral development, and the development of so-called complex emotions. In addition to the description of possible relations between social-emotional and cognitive development, disturbances in the area of social-emotional development will also be specifically examined. The emphasis in doing this will lie primarily on the underlying biological mechanisms and processes.

Essential reading To be announced.

Practical

Objectives: In this practical, the students will learn how to test children and adults using the Theory of MInd (TOM) test, and a test for recognizing emotions and moods.

Instructional form

8 tutorial group meetings, 4 lectures, 3 research project meetings.

Examination form

Combination of groupwork and test.



3.5 THE DEGREE COURSE: PSYCHOPATHOLOGY

3.5.1 Basic psychopathology program

In the design of this specialization, not much attention was initially paid to the field of mental health although the profile of such a direction of study is highly relevant to innumerable functions within this field of application. The students were interested in the field of mental health and later appeared to want greater clarity on the different possibilities that Maastricht has to offer within this area. In addition to a major in Neuropsychology, where mental health plays an important role, students can also develop their own path of study. One possibility is to follow courses within the mental health section of the Faculty of Health Sciences.

Psychology students who follow the psychopathology direction of study meet all of the initial requirements for a clinical psychology major at the other universities in the Netherlands. A graduate who has followed this psychopathology program is thus qualified for all follow-up programs (like post graduate studies) in the field of psychopathology.

Those students majoring in psychopathology are required to follow the courses Mood disorders, Anxiety, Sexuality; they are free to follow the courses Illusions and delusions, Psychosomatics and Psychodisagnostics and some other choice in their fourth year.

To qualify for relevant post graduate courses, students should follow Illusions and delusions, Psychosomatics and Psychodiagnostics.

3.5.2 Overview of the courses

Course 3.4.5 To be announced

6 ects

Course 3.5.5 Mood disorders

6 ects, coordinator: Vacancy

Objectives:

This course is concerned with mood disorders (depression, mania). The theme is approached from different perspectives (social, cognitive, pharmacological, etc.). The following topics will be considered in particular: normal and abnormal mood fluctuations; epidemiology; diagnostics; biological, psychological, and social explanatory models; and treatment options.

The relevant disciplines are: clinical psychology, (psycho)pharmacology, social and biological psychiatry, cognitive psychology.

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Practicals and skills

Study load of 32 hours.

Anamnesis or an intake interview is a conversation with a very specific purpose: to gather that information needed to make a diagnosis. In this training, the different phases in the intake interview for mental health problems will be considered. In addition, the question of how one establishes a diagnosis on the grounds of the interview and observational information will be addressed. The skills are evaluated via simulation contacts.

Practical: Experimental Psychopathology I

Study load of 12 hours.

This short practical consists of an experiment that the students conduct themselves. The experiment concerns the influence of mood on performance.

Lectures and examination form

The practical training is supported by approximately six lectures.

The examination consists of open questions and the writing of a report on the practical.

Course 3.6.5 Anxiety

6 ects, coordinator: Merel Kindt, Differential and Experimental Psychology

Objectives

To acquire knowledge of the origins, manifestations, natural course, and therapy for (pathological) anxiety.

The following themes will be considered: Nosology and prevalence/incidence of the most common anxiety disorders; experimental models of anxiety; cognitive behavior therapy; psychopharmacology.

Practicals and skills

Training: The behavioral-therapeutic process.

Study load of 32 hours.

In this training, the different analytic schemes that are part of the diagnosis on a learning-theoretic basis (e.g., the conduct of a functional analysis) will be considered. Within the framework of this training, a workshop will also be conducted to consider the different behavioral-therapeutic principles. The training consists of five meetings of three hours each, a workshop of six hours, a simulation contact, and a follow-up discussion of the simulation contact.

Lectures and examination form

The training is supported by approximately eight lectures.

Course 3.7.5 Sexuality

6 ects, coordinator: vacancy.

Objectives

- The purpose of this course is to gain:
- knowledge of the biological basis for both normal and deviant sexual behavior;

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- knowledge of the psychological basis for both normal and deviant sexual behavior;
- knowledge of the relational context for both normal and deviant sexual behavior;
- knowledge of the social context for both normal and deviant sexual behavior, including the law;
- knowledge of the diagnostic criteria for sexual disorders;
- knowledge of preventive strategies with respect to sexuality;
- knowledge of research methods in the area of sexuality;
- insight into one's own attitudes with regard to sexuality.

Further description of the course

The present course is concerned with sexuality in general and the sexological problems confronted by the behavioral scientist in actual practice. In addition to topics concerned with the biological foundations for sexual behavior, themes directly associated with the professional practice of the behavioral scientist will also be examined: (mental) health care, research, and prevention. The case histories will be considered within different reference frameworks (psychodynamic, system theoretic, learning theoretic, and feminist).

Essential reading

To be announced.

Practical

Objectives: Special work form / skills training. The starting assumption in this training is that everyone is involved with sexuality in one way or another. As a social scientist, there is also a very high probability that you will be confronted with the sexuality of people at one point or another. There are nevertheless so many different ideas, norms, standpoints, and perceptions in the domain of sexuality that a very professional attitude must be adopted. One must also have considerable insight into one's own ideas, norms, behavior, and emotions on the theme of sexuality. In this training, the theme of sexuality will be approached via role playing, magazine articles, statements, and simulation interviews. Attention will be devoted to learning how to talk and ask about opinions, emotions, and behavior in the domain of sexuality. The student will also become acquainted with the sexological intake interview; the professional interview undertaken to gain insight into a person's sexual history. The training consists of five meetings of three hours each. The last meeting is concluded with the presentation of a few case studies by the students.



Instructional form 12 tutorial group meetings, 5 practical meetings.

Examination form To be announced.

3.6 NON-COURSE RELATED PROGRAM FOR THE THIRD STUDY YEAR

In the third study year, the non-course related instruction in such areas as statistics and computer skills will again be provided throughout the entire academic year. The instruction is the same for all students. In addition, as part of the writing skills instruction in the third year, the students are expected to write a so-called third year thesis.

Computer skills III: Delphi

6 ects, course coordinator: Remy Rikers, Experimental psychology.

Objectives

To acquire more knowledge and skills needed to build applications independently in Delphi. Follow-up of the introductory course in Delphi.

Further description of the program

Delphi makes it possible to program in a more modern, efficient manner. Programs made with the aid of Delphi frequently resemble other Windows 95 applications. The system builds on the language of Pascal but offers, in addition, the possibility of building with little or no effort graphic interfaces to help the future user steer the program. A graphic interface can be seen as a window with different components (buttons, pictures, text, etc.) for the user to manipulate.

During the practical meetings, the student trains him/herself on so-called visual programming. An accomplished Delphi programmer always arranges the window first and then enters the necessary programming code. During the practical meetings, the student will also practice using the different possible components (windows, buttons, text fields, etc.) and their properties (position, size, color, content, etc.). When the graphic aspect is adequately mastered, greater demands are made on the already existing knowledge of Pascal and the skills needed to produce a well-functioning application.

Essential reading

• Practical book Delphi.

Instructional form Lectures will be primarily devoted to the provision of demonstrations and useful tips; obligatory practical meetings.

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Examination form Assignments and final examination.

Statistics III

7 ects, coordinator: Gerard van Breukelen, Statistics.

Part IIIa

Objectives

In many of the tasks in the field of psychology, tests and questionnaires are used as the method of measurement. In most cases, the answers of the individuals in question to a number of related multiple-choice questions are logically scored and summed to obtain a total score for the characteristic in question: intelligence, neuroticism, memory, or attitude (for example). A number of different questions can also then be posed: Do the items measure the same characteristic or are apples and oranges being compared? How reliable and valid is the total score as a measure of the characteristic in question? What is the measurement level of the total score?

How can one compare people who have responded to different subsets of items for one and the same characteristic (as in progress tests)? Which norms should the scores be compared to? These and related questions constitute the domain of so-called psychometrics. And this course offers an introduction to the most well-known classical and modern psychometric methods. The methods will be practiced using pen and paper but also using the computer and real data. The goal is to acquire a scientific attitude with respect to the foregoing questions.

Further description of the program

The course consists of two parts: classical and modern psychometrics. The following topics from classical psychometrics will be considered: classical reliability theory (Cronbach's a, split-half, retest), item analysis, generalizability theory, and validity. The following topics from modern psychometrics will also be considered: logistic models, item information, item selection, and weighting.

Essential reading

- Crocker, L. & Algina, J. (1986). *Introduction to classical and modern test theory*. Orlando: Harcourt Brace Javonovich College Publishers.
- van Breukelen, G. (1999). Factor analysis. In: Berger, Imbos & Janssen (eds.). Mthodologie en Statistiek deel II (Chapter 16). Universitaire Pers Maastricht.
- Handouts from the lectures.



SPSS Manual.

Instructional form

For classical psychometrics: 2 lectures, 2 tutorial group meetings in which both theory and pen and paper assignments are discussed, and 3 seminars in which the SPSS analyses are discussed.

For modern Psychometrics: 2 lectures, 2 tutorial group meetings in which both theory and pen and paper assignments are discussed, and 2 seminars in which the SPSS analyses are discussed.

Examination form

Multiple choice questions, open book test.

Part IIIb

Objectives

In addition to the statistical methods considered up to this point, there are many additional methods. At least two of these should be considered here: factor analysis and logistic regression. Factor analysis is a method to reduce the multitude of variables to a small number of underlying factors. At the beginning of this century, factor analysis was applied to reduce the scores on different tests to a small number of dimensions, such as verbal and spatial intelligence or extroversion and neuroticism. These days, factor analysis is frequently used to divide the items from a single questionnaire into subscales. Factor analysis is thus connected to psychometrics in such a manner.

Logistic regression is the analogue to linear regression and analysis of variance for a variable that is dichotomous and thus not continuous. Examples are: cured or not cured, passing or dropping out in a longitudinal study. With logistic regression, one can correct for the effects of other independent variables on the dichotomous variable and also examine the interactions between variables. The present course is intended to provide elementary training in factor analysis and logistic regression.

Further description of the program

The course consists of two parts: factor analysis and logistic regression. In the first part, the following will be considered: exploratory factor analysis (principal components, principal factors), values, loadings, rotations, confirmatory factor analysis (LISREL), caveats. In the second part, the following topics will be considered: stratified intercorrelation tables, odds ratios, logistic regression, interaction, relation to discriminant analysis, and loglinear regression.

Essential reading

 van Breukelen, G. (1999). Factor analysis. In Berger, Imbos & Janssen (eds.). Methodologie en Statistiek deel II (hoofdstuk 17). Universitaire Pers Maastricht.



SPSS Manual

Instructional form

For both parts of this course, the following holds: 2 lectures, 2 tutorial group meetings in which both theory and pen and paper assignments are discussed, 2 SPSS assignments, and 2 seminars in which the SPSS analyses are discussed.

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Examination form

Multiple choice questions. Open book test.

Writing skills III

6 ects, coordinators: Monique Doorschodt and Gerda Galenkamp, Neurocognition.

Nature of the research paper

During their third year of study, all students must write a third year thesis/paper. Approval of the students' final research practical (traineeship) is only provided when this third year paper is judged acceptable. Students who want to do their research practical abroad must write the third year paper in English.

Choice of topic

For this purpose, there are notebooks available at the psychology education office and learning resource center. The notebooks contain topics for students to choose from. For each topic, the faculty member who can guide and evaluate the research project is indicated. If a student wants to write the third year paper on a topic that is not included in the notebook, he or she must also arrange for a suitable supervisor.

Guidance of the writing

The faculty member responsible for the evaluation of the third year paper also guides the writing of the paper. Given that instructors have very little time for the guidance of the writing of such a paper, it is recommended that clear agreements be made ahead of time.

Further requirements

Two copies of the third year paper must be submitted in person to the education office together with a specific comment form which is provided by the education office.

On the title page, not only the title but also the following information should appear:

- the name of the author;
- the ID number;

• the name of the advisor for the content of the third year paper.

The third year paper must be written on an individual basis.



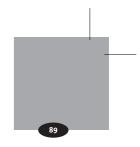
It should be a minimum of 15 pages, excluding the title page, references, tables, appendices, etc. The maximum length is 25 pages. Less than the minimum is simply not allowed. Exceeding the maximum must be justified in a foreword, and the length of the paper will be then be taken into consideration

Evaluation

The third year paper is evaluated with respect to aspects of both form and content (formulation of the problem, argumentation, specific subject matter, and elements of form). The different aspects are evaluated separately but weigh equally in the calculation of the final score, which is the scores for the different aspects summed and then averaged to obtain a total score. The final score must be acceptable. For further explication of the different aspects of the evaluation, the "handbook for writing skills instruction" should be consulted.

Submission procedure

The student supplies two copies of the paper to the psychology education office. This office then sends the two copies of the third year paper and the evaluation (comments).





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4.1 GENERAL

The final year of the psychology study consists of the choice of a number of electives, the conduct of a research practical, and a report on this research practical: the final thesis. For the first three course periods, the choice of electives comes from the Psychology Faculty. It is always possible to follow an elective course within a different faculty or university. Permission must first be requested from the examination board, however. The third year of the psychology study involved a differentiation of the curriculum, specialized instruction in one of the possible directions, and the choice of the final direction of study. The first half of the fourth study year consists of electives, which means that students can not only broaden their program but also further specialize it. All of this requires a wide offering of electives and instruction, however.

4.2 ELECTIVE COURSES

Students follow three electives chosen from a collection of 18 options. In addition, a choice can be made from courses 3.1a, 3.2a, or 3.3a for students studying the cognitive psychology major and from courses 3.1b, 3.2b, or 3.3b for students studying in the biological psychology major. The students must have selected three electives by the end of their third study year.

When less than six students have enrolled for an elective the instructor may dispense with it. Elective options with insufficient interest may also be replaced in the following academic year. Incidentally, every student may also contribute his or her own topic as the theme for an elective course (as an independent study), provided that the student can find an instructor who is prepared to advise him or her in doing this.

During the electives, individual activity stands central. At the same time, however, the students run the risk of losing contact with each other and the university. The elective instruction committee attempts to minimize this possibility by organizing a number of lectures, excursions, seminars, and other activities in order to — among other things — introduce potential fields of employment.

The elective course coordinators also see that the students spend a minimum of 6 hours a week on obligatory joint activities.

These joint activities can have very different forms. Examples:

- 1. A weekly seminar in which the student reports on how he or she is giving content to his or her choice of topic.
- 2. Reading groups. All of the students read an important piece on the elective topic.
- 3. A joint excursion.
- 4. A joint practical or workshop.

The elective course topics are typically contributed by the instructors. For each topic, a short description of the theme is provided in the "Electives" catalogue, which also

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contains information on the particular form of instruction. A brief overview of the elective options being offered in the periods 1 through 3 of the fourth study year (academic year 2000-2001) is presented below.

4.2.1 Overview elective courses 2000-2001

Each elective equals 7 ects.

Period 4.1	Period 4.2	Period 4.3
Psychodiagnostics	Adult neuropsychology	Child neuropsychology
Anton de Vries	Jelle Jolles	Jelle Jolles
Task analysis in a broader perspective	Naïve theories / misconception	Electronic learning environment
Els Boshuizen	Reinout Wiers	Remy Rikers
Psycho-active drugs: mechanisms of action and effects on human behaviour	Cognitive ergonomics (temporary title)	Behavioural neuroscience
Annemiek Vermeeren	Pieter Unema	Wijnand Raaijmakers
Timing of behaviour	Laboratory skills	Development of mathematical cognition
Hanneke van Mier	Fren Smulders	Erik van Loosbroek
Making you crazy: on the process of constructing normal and abnormal behaviour	Philosophy of consciousness	Plasticity of brain and cognition
Peter Vermeer	Rob de Vries	Leo Blomert
Selected research methods of cognitive neuroscience	The prospects and limitations of expertise	Eating disorders and addictive behaviours
Elia Formisano	Remy Rikers	Anita Jansen
Social cognition I	Social cognition II	Social cognition III
Social perception	The psychology of social action: motivation, cognition and behaviour	Behavioural change
Carolien Martijn	Carolien Martijn	Rob Ruiter



Period 4.1	Period 4.2	Period 4.3
Cognitive neuroscience I	Cognitive neuroscience II	
Neurocognition of language	Attention	
Bernadette Schmitt	Rainer Goebel	
3.1.A Redeneren en beslissen	3.2.A Propaganda	3.3.A Multimedia
3.1.B Neurowetenschap	3.2.B Neurocognitie	3.3.B Waarneming
Individual topic	Individual topic	Individual topic
Research participation	Research participation	Research participation

4.3 RESEARCH PRACTICAL AND MASTER THESIS

In the fourth year of study, four course periods are reserved for the research practical and writing of a thesis. To conclude the academic training of students, it is expected that they can independently design, conduct, evaluate, and report in the form of a thesis a well-circumscribed piece of research. The selected research practical should closely match the student's direction of study and major specialization. The research practical can also be undertaken abroad.

Depending on the major specialization and elective study of the student, the research practical may be undertaken in education (school counseling service, school medical services, special institutions) or in private industry (pharmaceutical industry, industrial research labs, food and drug testing organizations, applied research organizations, etc.). Those students with the (mental) health major may undertake the research practical in public centers for mental health (RIAGGS), psychiatric and general hospitals, rehabilitation centers, nursing homes, etc. Other potential places for a research practical are alcohol and drug rehabilitation centers, medical day care centers, and related institutions.

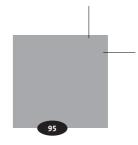
The students with the mental health or a major in neuropsychology who want to prepare themselves for employment in the area of mental health care are expected to acquire experience within a relevant mental health care setting. For these students, it may be specifically required that they complete their research practical in a clinical setting with a clear clinical orientation.

The range of research practicals and thesis topics reflects the range of employment possibilities in the field. In the psychology education office, a notebook with a list of possible practical locations is also available. Per practical, the following information is provided: a short description of what the practical entails, the type of research to be done, the name of the institution, the name of the contact person from the Faculty of

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Psychology, and the name of the contact person at the institution. A manual describing the steps to be taken for the research practical and when is also available. For more practical information on a research practical abroad, one should contact Ina Engelen, international relations officer of the Faculty of Psychology. For all remaining information and help with the choice of research practical and thesis topic, the student should first contact the coordinator of research practicals, Wijnand Raaijmakers (Neurocognition).



General information



5.1 EDUCATIONAL SUPPORT: OFFICE OF EDUCATIONAL ADMINISTRATION

The Office of Educational Administration (Bureau Onderwijs) provides logistic planning, educational administration, and course organization. The office also functions as a central information point for all educational and study matters, and it is responsible for the administration of examinations and provision of transcripts. The Office of Educational Administration is located at Universiteitssingel 40, 5th floor rooms 5.761 to 5.777.

Office hours: Monday through Thursday: 10 – 11 am and 3 – 4 pm. Friday: 10 - 11 am

Course schedule

Each course has its own schedule for all of the tutorial group meetings, lectures, and practical meetings. At least one week prior to the start of each course, these schedules are posted on the bulletin boards opposite the Psychology mailboxes (Universiteitssingel 40, ground floor).

Tutorial groups

The Office of Educational Administration assigns students to tutorial groups for each course period in a random manner. Due to the organizational complications involved, these assignments cannot be changed. Group assignments are posted on the bulletin boards opposite the Psychology mailboxes (Universiteitssingel 40, ground floor).

Sickness and Absence

In cases of sickness/absence lasting longer than ten consecutive days, students must inform the Education Office of the situation in writing. They should state their name, student ID number, address, and provide a brief description of the reason/cause of their illness and the expected duration of the absence. When the student returns, he or she must report to the Education Office during the first consultation hour after the day on which he or she has returned. Only when the above procedure is followed is it be possible to include the sickness report in the student's file for use in connection with examination reviews and requests for reexamination. In certain cases, the examination board may require medical certification.

Access to Student Files

Under the privacy regulations of the Maastricht University, students have the right to inspect their own files. Appointments for this purpose can be made with one of the staff members from the Office of Educational Administration during regular office hours. The file contains registration forms and correspondence with respect to the student. Copies of diplomas, figures on the duration of study, and so forth are kept at the Central Student Administration Office.

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Transcripts

Transcripts can be issued by the Education Office following confirmation of the examination results by the Examination Board. Duplicates are not issued. In cases of loss or theft, this must be reported in writing to the institution that issued the transcript (degree program/major and examination board). A declaration can then be issued stating the date on which the transcript was granted and the content of the degree program.

Mailboxes

All students have their own mailboxes. These are located on the ground floor of the Psychology building, Universiteitssingel 40. They are used by the Office of Educational Administration to distribute announcements and results, by students to communicate with each other, and by the faculty and staff to contact students directly. The mailboxes are arranged by student ID number.

5.2 STUDENT COUNSELLOR

The student counsellor is the primary contact person from the faculty for information and advice with regard to one's study and the psychology program. If necessary, the study counsellor may refer students to other members of the faculty or university. All talks with the counsellor are, of course, strictly confidential.

If students get bogged down or behind in their work for one reason or another, it is recommended that they contact the study counsellor without delay. The study counsellor can provide personal advice and supervision with regard to, for example, the choice of subjects, the planning of one's study, and — in situations where the student has fallen behind due to illness or other circumstances — a means for catching up. If required, the study counsellor can also mediate between students and faculty.

The student counsellor also monitors student progress and may, if necessary, call students in. The counsellor notes any bottlenecks in the instruction and examination programs (on the basis of information from the students, for example) and reports any such bottlenecks to the bodies concerned (for example, the instruction committee or examination board).

Students may come to the study counsellor for information and advice on such aspects of their study as:

- program content and structure;
- individual study programs;
- study options within and outside the faculty;
- selection of courses, major area of specialization, and electives;
- study planning;
- study methods.

For advice with regard to situations that make it difficult to study, such as:

motivation problems;



- concentration problems;
- psychologicalproblems;
- (physical) handicaps
- long term-illness

For questions and advice regarding (statutory) regulations, including:

- types of registration;
- duration of study;
- grants based on merit and study tempo;
- (appeal) procedures.
- To obtain certifications for:
- language ability, study funds, etc.

Appointments with the study counsellor, Gerard Korsten, Universiteitssingel 40, room 5.747, should be made via the secretariat for the Faculty of Psychology, tel.: 3881918.

5.3 UNIVERSITY LIBRARY

The University Library (universiteitsbibliotheek or UB) is open to all staff members and students from Maastricht University and also a number of individuals and institutions within the region. The mission of the UB is to support the main branches of the university in the fields of research, education, and social services. The services of the UB are regularly discussed by the different faculty library committees, which consist of representatives from the Library, different faculties, and students.

Collections and Locations

The modern collection at the UB is specialized in the following fields: knowledge technology (general sciences), arts and culture, economy and international business administration, law, medicine, health sciences, and psychology. In addition to these specialized topics, the UB also has a general university collection, which is interdisciplinary, non-specific, and includes the so-called Jesuit collection.

The UB collection is housed at a number of different locations. The medical, health sciences, and psychology collections are located at the Randwyck Library and Learning Resources Center (Universiteitssingel 50); part of the psychiatry and psychology collection is located at the Vijverdal Library (Vijverdalseweg 1).

Statistical data and government information on health care may be consulted at the Bonnefanten Library (Bonnefantenstraat 2), where the collections for the downtown faculties (general sciences, arts and culture, economy, international business administration, law) are also maintained.

All of these collections are freely accessible, and the vast majority of the books in the library collections can be borrowed under due observance of the relevant rules and regulations. A library card is required to borrow books and can be obtained from the

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lending administration at the Randwyck Library. Personal identification is required to obtain a card.

The most important lending rules are:

- the loan term is four weeks;
- the maximum number of books to be borrowed is 10;
- extension of the loan term is possible (via the library terminal, the lending desk, or telephone) unless the book has been reserved by another individual;
- books that have been borrowed can be reserved;
- journals cannot be borrowed (they can, however, be used for photocopying);
- books are to be returned to the location from which they were borrowed;
- books cannot be borrowed from the Learning Resources Center.

Library Information Desk

Learning Resources Center/Library Universiteitssingel 50, tel.: 3881804. Opening hours (subject to change):

8:30 am - 10:00 pm
8:30 am - 9:00 pm
10:00 am - 5:00 pm
12.00 am - 5:00 pm

Basic textbooks

The basic textbooks consist of those books that the psychology instructors think students should have in their possession. In the selection of basic textbooks, the following criteria play a role: relevance, scientific content, didactic quality, presumed "half-life," topicality, and price. In composing the list of basic textbooks, the amount reserved for the purchase of books by students (approx. 800 guilders per year) is also taken into account.

Function of the Learning Resources Center

It is mistaken to assume that the purchase of the basic textbooks is simply not necessary because sufficient copies of the books available at the Learning Resources Center (studielandschap). It is not only impossible to purchase sufficient copies of a book for the large number of students needing it but also not the primary purpose of the Learning Resources Center. The main purpose of the Learning Resources Center is to enable students to search for information relevant to their learning objectives in a collection of varied sources.

The books used for problem-based learning are categorized in the following manner.

- a. Core texts covering a significant part of a given field.
- b. Core reading. In most scientific fields, a substantial number of introductions, compilations, and surveys dealing with more or less the same topics are available, although each book may discuss the topics in a slightly different manner (different theoretical perspective; different examples, illustrations, style, organization of the subject matter, etc.).



c. Thematic books dealing with a restricted theme relevant to one or more of the assignments within a given course.

- d. Reference works, primarily dictionaries and atlases.
- e. Specialized books containing information more or less remote from the subject matter required to achieve the formulated learning objectives.

The core of the book collection in the Learning Resources Center is thus not formed by the basic textbooks but by the core reading, thematic books, and reference works (with specialized books located in the Library).

The educational systems, the instructors determine the learning objectives for the students. Via classes, practical training, lecture notes, book lists, etc., the subject matter that the student must master for examination is made known to them. The instructor has precisely delineated the learning activities to be carried out by the student. The students learn what they are assigned to learn and systematically work through the relevant literature. In problem-based learning, in contrast, the subject matter is centered around assignments. Generally speaking, the assignments and learning objectives are intended to lead students to explore different approaches and sources of information. In their pursuit of the learning objectives, students may tend to limit themselves to only the basic textbooks and any other required reading. In such cases, there is a great risk that the discussion and reporting within the educational meetings may come to a standstill because "everyone has read the same thing". The students have all consulted the same materials and are very likely to experience the educational meetings as less effective and interesting than meetings in which information from a variety of sources is presented.

For meaningful and enriching discussions within the educational meetings, different students must investigate different explanations, examples, problem presentations, descriptions of standpoints, and so forth. In other words, the quality of the discussions and reports in the educational meetings is very closely related to the extent to which the group members are engaged in exploratory study. And exploratory learning is a prerequisite for assimilative learning. That is, assimilative learning takes place when the student has selected and compiled information from a variety of sources and is in a position to explore and assimilate the most relevant and important information.

The Learning Resources Center is primarily intended to stimulate exploratory study. Assimilative study usually occurs at home, and it is therefore necessary to have the basic textbooks in one's possession.

5.4 PROGRAM EVALUATION

Program evaluation is an instrument to assess and explore the changes that may be necessary in instruction. Program evaluation provides information on specific educational/didactic problems and also suggestions for improvement. Program evaluation thus forms the basis for the exchange of information and consultation with those directly involved in the program and also serves as the point of departure for

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the implementation of concrete measures with regard to the curriculum. The current program evaluation is confined to the extensive course-based instruction and consists of the following four steps:

- Global screening of all instruction courses with the help of a questionnaire in which the objectives, working methods, and educational media are operationalized. The aim of this screening is to find out where problems have arisen and gain greater insight into the nature of the problems.
- 2. If necessary, in-depth evaluation based on the information obtained in step 1 may be undertaken for a course where bottlenecks have been detected.
- 3. The results of steps 1 and 2 are then made known to all concerned in the form of a short report in which the evaluator states his or her findings with regard to the information assembled, examination of the relevant course book, own observations, and other additional information.
- 4. If there is reason to do so, concrete measures to improve the instruction may then be undertaken on the basis of the information that has become available. Such an initiative may come from any of the parties involved: the educational administrator, the educational committee, the program director, the planning group, or the students themselves.

The program evaluation results are reported to the students via the bulletin boards near the Office of Educational Administration (Bureau Onderwijs).

5.5 COMPUTERIZED INFORMATION SYSTEM

In light of the fact that it takes a few days for the study results reported by the course coordinator to be entered into the student information system (ISS), the results are also posted on the bulletin boards near the counter in the Office of Educational Administration as soon as they are known. Once the data have been entered into the computer, the posted lists are removed and the students can view and/or print their results via the ISS.

Access to the student information system can be obtained via the PCs located at: the psychology computer room, Universiteitssingel 40 (first floor)the IT area (Library), Universiteitssingel 50; orP. Debyeplein 1.

Along with their student registration card, students receive a user name plus password combination consisting of their ID number (for example, 1960001) and a password, a four-figure code. This user name plus password are necessary to access various network services, such as e-mail, Internet, and the ISS.

5.6 STUDENT FACILITIES

Maastricht Student Housing Foundation/Housing Agency

The Housing Agency (Kamerburo) of the Maastricht Student Housing Foundation (Stichting Studentenhuisvesting Maastricht) functions as an intermediary for



students in search of housing in the Maastricht vicinity. Rooms are available from both private parties and housing associations. There is no waiting list for rooms from private parties. Waiting periods for rooms from the housing associations may be as long as 24 months. The Student Housing Agency also helps arrange rooms for foreign students and guests staying in Maastricht for shorter periods of time. In addition, both tenants and renters can contact the Student Housing Agency with

questions or problems related to rental law, leases, tax matters, etc.

Rooms for exchange students and staff at the Faculty of Psychology can be arranged through the International Relations Officer.

Phone for the Kamerburo:	+ 31 43 3883100
Fax:	+ 31 43 325 54
Address:	Keizer Karelplein 12
Postal address:	P.O. Box 702, NL-6200 AS Maastricht

Living expenses in Maastricht

In order to plan your budget, there are some expenses you need to consider. Here is a list to give you an indication of what it may cost to live in Maastricht. Room & Board 2000/2001:

- single room (dormitory) per month: NLG 700
 shared double room (dormitory) per month: NLG 450
- Communal kitchen facilities are available for students to prepare their own meals. Groceries (average per week): NLG 70
- Lunch/dinner at the student cafeteria (Mensa): NLG 8 17.50
- Restaurant: NLG 20 or more

Theater: NLG 10 - 60

Movies: NLG 12.50 - 15

Second-hand bike: NLG 100

Bus ticket: NLG 5 or more

Drinks: NLG 2.50

University sports card for a year: NLG 80 (academic year 00/01)

Study books (available at the academic bookstore) per year: NLG 800

Insurance (the purchase of Dutch health and liability insurance through the Maastricht University is an option for students who are not covered by their current insurance while living abroad): NLG 300 (per 4 month period).

Student Alien Resident Permit (all students from outside the European Union studying in the Netherlands for a period longer than 3 months must report to the police within 8 days after arrival to obtain a residence permit): NLG 125.

INKOM Working Group

Student life is an important aspect of study in Maastricht. To inform students about student life in Maastricht, the INKOM working group organizes a four-day introductory program (the 'INKOM") prior to the start of the academic year. The objective of

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this program is to introduce students to their fellow students; to the housing, health care, sports, and cultural facilities; and to the city of Maastricht. This introduction is intended for students of the Maastricht University and students of the Maastricht Institute for Professional Education (Rijkshogeschool).

More information is available from the INKOM working group.

 TelePhone:
 + 31 43 388 3393

 fax:
 + 31 43 388 4896

 Address:
 Zwingelput 4, room 0.22-0.24

Opening hours: Monday through Friday: 10 – 11 am.

Luna-tik (Luna-tic): Psychology student association

Luna-tik is the student association for the Faculty of Psychology. It's aim is to represent the interests of students in the broadest sense of the term: Not just for pleasure and relaxation but also for curriculum-based activities.

Luna-tik members can purchase their study books at a 10% discount. The membership fee is NLG 10 per year.

Telephone: + 31 43 388 1957 Visiting address: Universiteitssingel 40, fifth floor, room 5.759

ESN: ERASMUS Student Network

The Erasmus Student Network was initiated by students from the twelve former EEC member states. The aim of the ESN is to provide adequate care and ensure social integration of students who conduct part of their studies at a foreign university. The core activities of the ESN in Maastricht consist of advising all exchange students and not only Erasmus students via a mentor system. The basic principle of the mentor system is to bring every foreign student into contact with a Dutch student from the same faculty upon arrival. The Dutch student can help his/her guest find his/her way around the university and Dutch social life, if necessary. In addition to this, the ESN organizes a number of social and cultural events to ensure integration of exchange students into Dutch society.

For more information about the ESN and/or mentor system:

ESN Maastricht, PO Box 616, 6200 MD Maastricht, telephone: +31 6 55906 590/591. Fax: + 31 43 388 3089. Email: esn@esn-maastricht.nl. Website: www.esn-maastricht.nl

Copying and binding

Students wishing to make photocopies can purchase cards for the machines at the following locations: Bonnefantenstraat 2, Bouillonstraat 3, Tongersestraat 53, Universiteitssingel 40, Universiteitssingel 50, and Zwingelput 4. These cards can be used for all copy machines at all locations within the University.

Facilities for special copies (A3 format, color), the binding of term papers, and so forth are available at the Copy Shop (Universiteitssingel 50 and Tongersestraat 53)



University Cafeteria

The University Cafeteria (Mensa) offers a wide choice of food at prices students can afford. In addition to a variety of snacks, salads, drinks, and sandwiches, a choice of two warm meals is offered every day.

The Maastricht University also has two cafeterias:

Tongersestraat 53

Opening hours: Monday - Thursday 8:30 am - 6:30 pm; Friday 8:30 am - 5:00 pm. Universiteitssingel 50

Opening hours: Monday - Friday 9:30 am - 5:00 pm.

UM Sport

The UM Sport organizes various activities in the field of physical training and sports between September and July. Activities include lessons and training courses, competitive and recreational sports, championship tournaments, and various other sports events with the other universities. The so-called sport card can be purchased from the Physical Training and Sports Department and allows you to participate in all kinds of athletic activities at a reasonable price. The activities organized by the Maastricht University during the month of September are free for all students. For 1999/2000, the price of a sport card was NLG 75 for Maastricht University students. In addition to the above activities, the Physical Training and Sports Department supports the student sport associations affiliated with the MUSST ("Maastricht

University Student Sport Foundation"). Further information (handbook, programs, course, and competition folders) can be obtained from the UM Sport Office.

 Telephone:
 + 31 43 388 3080

 Address:
 Zwingelput 4

 Opening hours:
 Monday - Thursday

 11:00 - 12:30 am and 1:00 -4:00 pm; Friday 10:00 -12:00 am.

University Newspaper: The Observant

The Observant is an independent news and opinion weekly with close ties to the Maastricht University. The paper includes an information section, the Bulletin, where the different faculties of the University can publish current information. The Observant also includes a weekly English contribution with the latest news. In

addition to this, a four-page English supplement is published every four weeks. Telephone: +31 43 388 3174

Address: Keizer Karelplein 10

Studium Generale Maastricht

A university education is only complete when students have the opportunity to participate in extracurricular activities offering a broad perspective on art, culture, science, and society. To provide such an opportunity, Studium Generale organizes a varied program on divergent topics. Regular features include a lecture series, debates on current affairs (called "het hete hangijzer" or "hot topics"), interviews with people

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from the world of art and culture (the so-called "In the Spotlight" program), the "Open Podium" which allows students to demonstrate their own talents, talk shows (under the title, "Fragments ..."), a debate competition for students, and a Cultural Day. Yet another annual event is the internationally renowned "Dr. J. Tans Lecture" held in honor of a founder of the University.

Most activities are free of charge for students. Information on the Studium Generale activities can be obtained from the SG Bulletin in The Observant and is also widely distributed via other media.

In addition to attending Studium Generale activities, students are also welcome to actively participate in the organization of the activities. There are a number of working groups for this purpose, and it is also possible to submit a program proposal to Studium Generale. For further information, contact one of the staff members at the Studium Generale office.

Telephone:+ 31 43 388 3541Address:Keizer Karelplein 10.

5.7 INSTRUCTION ROOMS

Tutorial group meeting rooms

- Universiteitssingel 40 (Uns 40), ground floor upto fifth floor
- Universiteitssingel 50 (Uns 50), first and fifth floors

Computer Rooms

Universiteitssingel 40 (Uns 40), first floor

Seminar Rooms

- Universiteitssingel 40 (Uns 40); Ground floor: 0.737 Diepenbeekzaal, 35 seats.
- Universiteitssingel 40 (Uns 40); Ground floor: 0.731 Luikzaal, 35 seats.
- Universiteitssingel 40 (Uns 40); Ground floor: 0.771 Tongerenzaal, 70 seats.
- Universiteitssingel 50 (Uns 50);Ground floor: 0.468 and 0.420, 35 seats.
- P. Debyeplein 1 (Deb 1);Ground floor: 0.124 and 0.126, 35 seats.

Lecture Halls

- Universiteitssingel 40 (Uns 40), ground floor 0.647 Maastrichtzaal, 404 seats.
- Universiteitssingel 40 (Uns 40), ground floor 0.673 Akenzaal, 150 seats.
- Universiteitssingel 50 (Uns 50), ground floor 0.402 Blue hall 259 seats.
- Universiteitssingel 50 (Uns 50), ground floor 0.406 Green hall 65 seats.
- Universiteissingel 50 (Uns 50), ground floor 0.480 Red hall 65 seats.
- P. Debyeplein 1 (Deb 1), ground floor:0.122 auditorium 175 seats.
- Tongersestraat 53 (Ts 53), ground floor, lecture hall 500 seats.
- Tongersestraat 53 (Ts 53), ground floor, assembly hall 200 seats.



5.8 ASSESSMENT

Assessment times (subject to change):First year students9:00 - 11:00 amSecond year students11:30 - 1:30 pmThird year students2:00 - 4:00 pm

Assessment dates 2000/2001:

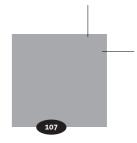
First course period	Friday September 29, 2000
Second course period	Friday November 10, 2000
Third course period	Friday December 22, 2000
Fourth course period	Friday February 16, 2001
Fifth course period	Friday April 6, 2001
Sixth course period	Friday May 18, 2001
Seventh course period	Friday June 29, 2001

Parallel program

The dates for assessment related to the non-course program are announced via the parallel program coordinators and in the course schedules.

Registration for examination retakes

Students must register to retake an examination. Such registration must be done at least two weeks prior to the date set for retake. Late registration may result in the student being barred from the retake. Registration is effected via a portfolio which is monitored by the Office of Edcuational Administration.



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6.1 INTRODUCTION

Established in 1976, the Maastricht University is the youngest university in the Netherlands. At the present time, it has more than 8,000 students and more than 2,500 staff members and is experiencing rapid growth. In September 1997, the seventh faculty was established, the Faculty of Psychology. The other faculties are: the Faculty of Arts and Culture, the Faculty of General Sciences, the Faculty of Economics and Business Administration, the Faculty of Medicine, the Faculty of Health Sciences, and the Faculty of Law.

6.2 EDUCATION AT MAASTRICHT UNIVERSITY

The faculties are responsible for thirteen academic programs that my have various degree options. The three newest programs were initiated in September 1995: Psychology, Fiscal Economics, and the European Law School.

The Arts and Culture Program

This program is the only one of its kind within the Netherlands and concentrated on the analysis of scientific and non-scientific viewpoints within their social and historical contexts. Philosophy, history, sociology, and literature are the principal disciplines within the program. The program is organized by the Faculty of Arts and Culture.

Economics Program

This program includes General Economics, Business Economics, International Management, and International Economic Studies. Students who opt for Business Economics may specialize in accountancy.

Econometrics Program

This program is intended to enhance economic knowledge and its utilization in practice with the use of mathematics and statistics. A distinctive feature of the program is that the degree phase is explicitly related to faculty research in such areas as the econometrics of financial markets, the economics of technological development and innovation, and the economics of labor.

International Business Administration Program

Organized by the Faculty of Economics and Business Administration, this program adopts an interdisciplinary approach to the study of the manner in which organizations function in actual practice.

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Fiscal Economics Program

Tax Economics is the fourth program offered within the Faculty of Economics and Business Administration. As a sub-discipline of Economics, Tax Economics involves the study of the consequences of taxation for the economic activities of individuals, companies, and organizations.

Health Sciences Program

This program focuses on the interrelationships between society, sickness, and health. There are seven degree options.

Knowledge Technology Program

Knowledge Technology is an exact science with its roots in mathematics and information science and includes aspects of knowledge management and application. The knowledge technology program is the first international university program in the Netherlands as students may follow the first two years of the program at the Limburg University Center in Diepenbeek, Belgium.

Environmental Health Science Program

Organized by the Faculties of Medicine and Health Sciences, this program focuses on the interaction between humanity, health, and the environment.

Psychology Program

Structured according to the new developments that have occurred in the field during the past decades, this program constitutes a major innovation for the study of psychology in the Netherlands. The program is centered around the most recent insights within the areas of cognitive and biological psychology, perhaps the two most advanced areas of psychology.

Law Program

This program includes Dutch law (evening classes also available) and tax law. In the 1995/96 academic year, the European Law School was established along with a degree program that combines the most important aspects of Dutch law with wide-spread knowledge of the fields of European and international law and international comparative law.

6.3 INTERNATIONAL AND INNOVATIVE

Ever since its founding, Maastricht University has adopted a unique approach to education. Characteristic of this approach is an emphasis on Problem-Based Learning (PBL). The scientific research is also organized within a matrix structure and thus in a distinctive manner. In addition, Maastricht University distinguishes itself from other educational universities with its highly international orientation. Attracted by its



reputation, students from all over the Netherlands as well as an increasing number of foreign students are now opting to study at Maastricht University.

6.4 INTERNATIONAL EDUCATION

The Maastricht University places great emphasis on international education. Most of the programs have a definite international orientation and considerable attention is devoted to international issues in most of the programs. Many of the elective subjects and some of the required subjects are offered in English or some other foreign language. A large number of foreign students study at Maastricht University and there are ample opportunities for students to complete part of their study at a foreign university

The Maastricht University has access to a great many grants for study and training abroad. Most of these grants are allocated within the framework of the ERASMUS/SOCRATES program and the SWOL Foundation program. Under these and similar programs, the Maastricht University maintains contacts with more than 100 universities in Europe and the rest of the world.

The goal of such international programs as ERASMUS/SOCRATES is to increase the exchange of students between universities. The grants made available through these programs are intended to partially cover the extra costs involved in study and training abroad. In part as a result of these programs, more than 25% of the fourth-year students now have an opportunity to attend a foreign institution.

The international education of Maastricht University students has different forms within the different faculties. The Faculties of Medicine and Health Sciences and the Faculties of Economics and International Business Administration, for example, emphasize collaboration with innovative sister institutions throughout the world, which also includes a number of developing countries. The Faculty of Law and the Faculty of Arts and Culture are more concentrated on cooperation within Europe. Students in the Knowledge Technology program within the Faculty of General Sciences may study for the first two years at the Limburg University Center in Diepenbeek, Belgium. Within the framework of the ALMA program, Maastricht University also collaborates with the Universities of Aachen (Germany), Diepenbeek (Belgium), and Liege (Belgium).

6.5 INTERNATIONAL EDUCATION WITHIN PSYCHOLOGY

A special Executive Internationalization Committee, supported by the International Relations Officer, is in charge of faculty affairs with regard to internationalization. Under the auspices of this committee, student exchange programs have been set up with universities abroad and a number of foreign research practicals have also been made available.

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In order to accommodate foreign students wanting to enroll in a semester program at Maastricht University, a large number of courses are offered in English. For further information: Ms. Ina Engelen telephone: + 31 43 3881920/3881886 fax: + 31 43 388 4199 e-mail: I.Engelen@psychology.unimaas.nl website: www.psychology.unimaas.nl

6.6 ADDRESSES

The general mailing address for Universiteit Maastricht is: P. O. Box 616 6200 MD Maastricht The general telephone number is: + 31 43 388 2222 http://www.unimaas.nl

If you would like to know more about living or studying in the Netherlands, the following books are recommended:

Introduction to living in Holland ISBN 90-5464-025-1

A practical guide to living in Holland ISBN 90-5464-024-3

The Education System of the Netherlands ISBN 90-5464-020-0

One can also visit the web-site of NUFFIC (Netherlands Organization for International Cooperation in Higher Education): http://www.nuffic.nl/ 112

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