



UNIVERSITY OF AMSTERDAM

Faculty of Social and Behavioural Sciences
Graduate School of Child Development and Education

RESEARCH MASTER

CHILD DEVELOPMENT AND EDUCATION

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RESEARCH MASTER CHILD DEVELOPMENT AND EDUCATION

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RESEARCH MASTER CHILD DEVELOPMENT AND EDUCATION

The University of Amsterdam offers the Research Master “Child Development and Education”. This two-year master programme integrates research in the areas of child development and education. Both disciplines are characterised by empirical research into learning and development processes in various settings. The programme is meant for students with a bachelor's degree in pedagogical sciences, educational sciences, or with a bachelor's degree in an adjacent field (e.g., psychology, sociology), who want to specialise in this specific field of research. Both Dutch students and students from abroad can apply.

1. Introduction

The Research Master Child Development and Education trains students to conceive, design, conduct and report high-quality research in the field of child development and education. The programme has been developed for excellent students who are motivated to conduct research and who intend to pursue academic research careers in child development and education. Research Master students acquire in-depth disciplinary knowledge, familiarity with relevant research methodology and practical experience in carrying out research. The programme takes two years to complete. In both years students take courses and gain experience in conducting research.

Courses

Students choose from disciplinary courses that give systematic overviews of fundamental, theory-driven research into the nature, development and explanation of child attributes. Research topics vary, but share the bioecological model as a common theoretical framework. In addition to a selection of disciplinary courses, students take an introductory course on bioecological models, courses in methods and statistics and a supporting course in writing and presentation skills. See Sections 2 and 3 for the programme schedule and Section 10 for course descriptions.

Research practice

Each student carries out two research projects. The topic of the first research project is chosen halfway through the first year of study. Preparations for the more extensive second research project may begin as early as the start of the second year. Students participate in one of the department's research groups, where they contribute to ongoing research, prepare reports and write a paper that can be submitted to an international peer-reviewed journal. These activities are designed to strengthen every area of the student's research skills, including theoretical reflection, the formation of hypotheses, planning, data collection and analysis, report writing and presentation.

The department has extensive experimental research facilities, including video-monitored observation rooms, a baby lab and an ERP-research lab equipped with facilities for taking electro-physiological measurements. It is also possible to conduct observational and interventional research in families or classrooms, to participate in large-scale skills-testing research on children and adults, or to conduct educational surveys using questionnaires for different target groups. Alternatively, students may choose to do their research at another department, possibly at another university, possibly abroad, taking advantage of the national and international contacts of the research master staff members.

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Examination programme

The study load is 120 credits (ECTS). Table 1 shows the examination programme for students who start in September 2013. The programme already leaves some freedom of choice, but students may opt to replace a limited number of courses by courses that are offered by other departments of the University of Amsterdam, or by other universities (Section 3).

Table 1. Examination programme for students who start in September 2013

Research Master Child Development and Education	
Study load:	120 EC
Degree to be awarded:	Master of Science
Format:	fulltime
Admission:	Bachelor's degree in Pedagogical Sciences, Educational Sciences, or an adjacent bachelor's degree, or equivalent university education
Selection criteria:	Grades, motivation, prior education
Programme director:	Prof. dr F.J. Oort (f.j.oort@uva.nl)
Examination programme	Credits
<i>Introductory course:</i>	
Bioecological models: State-of-the-art (7055R106AY)	6
<i>Disciplinary courses (choose four out of eight):</i>	4 × 6
Childhood education, family support and development (7055R026AY)	
Learning and social-emotional disorders in educational contexts (7055R036AY)	
Developmental and parenting problems: aetiology and intervention (7055R016AY)	
Micro-processes at school and learning (7055R046AY)	
Foundations and philosophy of education (7055R146AY)	
Criminal behaviour of juveniles (7055R136AY)	
Dyslexia (7055R126AY)	
Distal and proximal processes in educational research (7055R116AY)	
<i>Methods, statistics, and skills:</i>	
Methods and statistics in educational research (7055R090BY)	12
Structural equation modelling (7055R070BY)	12
Multilevel data analysis (7055R056AY)	6
Longitudinal data analysis (7055R066AY)	6
Academic skills: writing and presenting (7055R083CY)	3
<i>Research projects:</i>	
Thesis 1 – first year research project (7055R210HY)	21
Thesis 2 – second year research project (7055R300KY)	30
Total	120

The final attainment level of the programme is described in Section 4. To reach this level, students will be continuously supported by supervising staff members; see Section 5. All staff members themselves are experienced researchers; see Section 6 for a full list of Research Master staff members.

After successful completion of the programme the student will receive a Research Master's degree in Child Development and Education, and the title Master of Science (MSc). A PhD position is the most obvious next step in an academic research career; see Section 7.

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Please notice that the Research Master is selective. To ensure intensive instruction, support, supervision and counselling, enrolment is restricted to a maximum of 15 students per year. This means that students must apply to be admitted to the Research Master. Application requirements and admission criteria are given in Section 8, and tuition in Section 9. Of course, much more information can be found on the internet:

About the Research Master: <http://www.uva.nl/en/education/master-s/master-s-programmes.html>
About the Graduate School: gscde.uva.nl
About the University: <http://www.uva.nl/en/home>
About studying in Amsterdam: <http://www.uva.nl/en/education/master-s/studying-at-the-uva>

2. General programme

The programme takes two full years of study and has a study load of 120 credits (ECTS; European Credit Transfer System). Table 2 gives an overview of all courses in the current standard curriculum (but see “Personal programme”, Section 3). It also shows how courses and research projects are distributed over the months of the two years. In the curriculum we distinguish between (I) disciplinary courses, (II) courses in methods and statistics, (III) skills and (IV) research projects.

I. Disciplinary courses (30 credits)

The disciplinary courses (6 credits each) provide systematic overviews of fundamental, theory-driven research into the nature, development and explanation of child attributes. All students begin with the introductory course *Bioecological models: State-of-the-art* (6 credits) and then they choose four out of the eight other disciplinary courses (6 credits each). The bioecological model serves as an organising principle for all research that is covered by the disciplinary courses. The first four disciplinary courses are “domain courses”, as they give an overview of all research that is carried out by the research groups that participate in the Child Development and Education programme: (1) *Childhood education, family support and development*; (2) *Learning and social-emotional disorders in educational contexts*; (3) *Developmental and parenting problems: aetiology and intervention*; (4) *Micro-processes at school and learning*. The other disciplinary courses concern specific research topics: (5) *Foundations and philosophy of education*; (6) *Criminal behaviour of juveniles*; (7) *Dyslexia*; and (8) *Distal and proximal processes in educational research*. See Section 10 for descriptions of these courses. For additional courses, and for an explanation of possible study routes, see “Personal programme” below (Section 3).

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Table 2. Schedule of the two-year Research Master programme

FIRST YEAR									
Sept	Oct	Nov	Dec	Jan	Feb	March	April	May	June
Bioecological models (6)*		Micro-processes at school (6)			Learning and social-emot. disorders (6)				
		Developmental and parenting problems (6)			Childhood educ. and family support (6)				
Methods and statistics in educational research (12)*					Multilevel data analysis (6)*			Academic skills (3)*	
				Research project: Thesis 1 (21)*					
SECOND YEAR									
Sept	Oct	Nov	Dec	Jan	Febr	March	April	May	June
Foundations and philosophy (6)		Dyslexia (6)			Distal and proximal processes (6)				
Criminal behaviour of juveniles (6)									
Structural equation modelling (12)*					Longitudinal data analysis (6)*				
Research project: Thesis 2 (30)*									

*Asterisks denote compulsory courses. Values in parentheses denote European credits (in ECTS; European Credit Transfer System). (For example, choose between *Micro-processes* and *Developmental* in the first year, and between *Micro-processes*, *Developmental*, and *Dyslexia* in the second year. In both years you can choose between *Learning*, *Childhood*, and *Distal and proximal processes*. Choose between *Foundations* and *Criminal behaviour* in the second year.)

II. Courses in methods and statistics (36 credits)

There are four courses in methods and statistics, covering the statistical techniques that are most commonly used in research in child development and education. Multivariate statistics are examined in (1) *Methods and statistics in educational research* (12 credits), which covers the best known generalised linear models; and (2) *Structural equation modelling* (12 credits), which covers path models, factor models, and their extensions. The other two courses, (3) *Multilevel data analysis* (6 credits) and (4) *Longitudinal data analysis* (6 credits), go more deeply into the analysis of data that are typical of research in child development and education. See Section 10 for course descriptions.

Be aware that it is not only statistical theory that is taught in these courses. Students learn how to use statistical software and to apply statistical techniques to real data sets from research in child development and education through practical assignments in each of the four courses. Moreover, articles from academic journals are used to illustrate how the statistical techniques are applied and described in published research in child development and education. In this way, and through writing assignments, students also learn how to report and interpret statistical results.

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III. Supporting courses (3 credits)

In the supporting course *Academic skills* (3 credits) students are trained in writing and presenting. They learn how to report research for publication in academic journals in accordance with the American Psychological Association (APA) publication manual and they learn how to present research results in professional meetings. See Chapter 10 for the course description.

For more extensive training in writing English students may want to take a supplementary course, such as the dedicated course *Academic Writing* (offered by the PhD education programme of our Graduate School). Please notice that this supplementary course is extracurricular, so that the credits do not count in the 120 EC of the examination programme (Table 1).

IV. Research projects (51 credits)

Students carry out two research projects, resulting in *Thesis 1* (21 credits) in the first year and *Thesis 2* (30 credits) in the second year. Students are encouraged, but not required, to choose different objects of study for Thesis 1 and Thesis 2.

Halfway the first year each student chooses the subject of the first thesis. Supervised by the associated staff member, the student participates in the research group of the staff member, and contributes to ongoing research of the research group, by carrying out part of the research and writing a research report (Thesis 1). In this way, the student gains experience in all aspects of research, including theoretical reflection, hypothesising, designing, data collection, data analysis, reporting and presentation. Thesis 1 is graded by the supervisor and one other staff member.

Preparations for the second research project may begin as early as the outset of the second study year. The student chooses the subject of research and a supervising staff member, and writes a research proposal. This proposal must be approved by two other staff members, before the student can continue the research activities. The proposed research project can be carried out in one of the research groups of the department or outside the department, possibly at another university. The student works autonomously, consults the supervisor and other staff members when appropriate, and participates in the research group of the supervising staff member. The full research project may be described in an internal research report, but the student must also present the research results in a paper that can be submitted to an international, peer-reviewed academic journal. Both research report and journal article may qualify as Thesis 2, which is graded by the supervising staff member and two other staff members.

Thesis 1 students present their results at the introductory meeting for new students in September. At the end of the second study year, Thesis 2 students present their results to an audience of research master staff members, other members of the department, and fellow students.

3. Personal programme

Each student sends his or her personal programme to the programme manager. The programme manager looks at the programmes and programmes that deviate from the general programme are sent to the Examination Committee. After checking that the personal programme complies with the Research Master criteria (i.e., quality and coherence), the Examination Committee approves the personal programme. The personal programme may deviate from the general programme and study routes described in Section 2. Of course, the general programme already leaves some freedom of choice, as students may choose four out of the eight disciplinary courses in the current programme. An additional option is to take a course outside the general programme.

Students are allowed to replace a limited number of courses of the general programme with “outside courses”, that is, courses that are offered by other departments of the University of Amsterdam, or by other universities. For each outside course, the Examination Committee consults staff members of the Research Master, the course description and if necessary the lecturer of the outside course and the study materials to verify whether the course meets the requirements of quality and coherence of the Research Master programme. Of course, outside courses also have to fit within the time schedule of the general programme to be considered (see schedule in Section 2).

Clinical route (only applicable to Dutch students)

Students with specific interest in clinical research, who want to work as a clinical researcher or “science-practitioner” in the Dutch practice, will want to be registered as a clinical diagnostician (in Dutch: “Orthopedagoog Generalist” or “Gezondheidszorgpsycholoog”). To qualify for the official continuation courses and training for clinical professions in the Netherlands, students must (1) have a bachelor’s degree in pedagogy or psychology with a study programme that meets the requirements described elsewhere (see study guide master programme “Orthopedagogiek Registraties voor klinisch orthopedagoog en GZ-opleiding”), and (2) follow the clinical route within the research master programme. Please note that the clinical route is only relevant for Dutch students, as this route qualifies for the continuation courses for clinical professions in the Netherlands. In other countries other requirements apply. However, international students can of course follow the clinical research master courses *Developmental and parenting problems* and *Learning and social-emotional disorders in educational contexts*, and choose clinical subjects for their thesis work.

In the first year, after the introductory course *Bioecological models* (6 EC), students who pursue the clinical registration take the following disciplinary courses:

- *Developmental and parenting problems: aetiology and intervention* (6 EC), and
- *Learning and social-emotional disorders in educational contexts* (6 EC).

These courses prepare students for the practical in diagnostics and treatment,

- *“Practicum diagnostiek en Practicum behandeling”* (6 EC, see study guide),

which can be followed during the first semester of the second year. The language of instruction in this practical is Dutch. After completing the practical, students qualify to do a clinical practical (“klinische stage”) with or without clinical case studies (“casussen”). This clinical practical might be combined with the Thesis 2 research project, but the combination of a clinical practical and a clinical research project is expected to take some months longer than the regular 30 EC research project.

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The clinical route within the research master still leaves room for one other disciplinary course from the research master's general programme (Table 1). In addition, students take the compulsory courses in methods and statistics (36 EC), writing and presenting skills (3 EC) and carry out two research projects (Thesis 1, 21 EC; Thesis 2, 30 EC). Students are still free in their choice of subjects for the research projects, but they are encouraged to choose clinical subjects of research that are consistent with the clinical route. Moreover, as explained, the second research project might be combined with clinical practice. If not, the clinical practical can be carried out subsequently.

4. Final attainment level of the programme

The Research Master's programme aims at delivering students who are able to autonomously design, carry out and report high quality research in the field of child development and education. The programme is developed for excellent students with a proven motivation for carrying out research and with the ambition to qualify for an academic research career in child development and education.

After graduating, students will have profound knowledge (disciplinary and methodological) of a large variety of research in child development and education and specialised expertise in carrying out research. They will have the ability to read and understand advanced publications in their field of specialisation and related areas and they will also be able to participate in and contribute to the further development of their disciplinary terrain. They will have the knowledge, insight and skills to carry out research autonomously. More specifically, graduates demonstrate the following knowledge, abilities and attitudes.

Knowledge and understanding

The graduate has:

- a broad theoretical knowledge of his/her discipline and a profound theoretical knowledge in the main field of specialisation and two related fields;
- a thorough command of research methods and techniques in general and in a more specific sense enabling the student to do (PhD) research in his/her own or in adjacent disciplinary fields.

Applying knowledge and understanding

The graduate has the ability to:

- carry out advanced techniques for pedagogical or educational research and to apply advanced software in this field;
- design, execute and report research independently, as testified by reports and presentations, with which the student qualifies for (PhD) research;
- evaluate pedagogical or educational research of others and contribute to improving it theoretically and methodologically;
- plan, decide and take responsibility in professional situations;
- plan, carry out and execute research projects.

Making judgments

The graduate has an awareness of:

- ethical aspects of professional interaction with others (co-researchers, clients and subjects), including the broader consequences of his/her own research results and professional practice;
- his/her own limitations and when to call upon the expertise of others or refrain from action;
- the implications of research results for the practice of education.

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Communication

The graduate has the ability to:

- report and present research in English to an academic community as well as to a more general public;
- cooperate with individuals or in teams;
- combine independent work and cooperation in groups.

Learning skills

The graduate has

- the willingness to (re)consider arguments and conclusions in the light of empirical results or valid counter-argumentation.

5. Study counselling

The timetable of the general programme (Section 2) guarantees an even distribution of study load over the two years of study. General study progress will be carefully watched by the programme director. Progress of the activities in the research projects will primarily be guarded by the supervising staff member. In addition, students can appeal to four study counsellors who are working at the educational institute. Study counsellors may be contacted through the office administration (phone: 020-5251251, open daily between 10:00-14:00 h, e-mail: infopow@uva.nl).

Besides supervision of study progress, students may also need counselling with respect to study content: the choice of courses for the personal programme, the choice of subjects for the research projects, and ultimately the choice for an academic career in research. For advice on this matter, the student does best to call on the staff members who teach the subjects that the student takes most interest in. Yet the student may of course also call on the programme director, programme manager or the study counsellors.

6. Staff members of the Research Master

Only staff members can act as lecturers of Research Master courses or as supervisors of research projects. All staff members themselves are researchers with experience and expertise in their field of research. Current Research Master staff members are, in alphabetical order, dr J.J. Asscher, prof. dr S. Bögels, dr H.M.W. Bos, prof. dr C.A.M. van Boxtel, dr M.A.H. Braaksma, dr E.I. de Bruin, dr C. Colonesi, dr H.E. Creemers, prof. dr G.T.M. ten Dam, dr J.P. van Drie, prof. dr R. Fukkink, dr M. Hoeve, dr T.M. Janssen, dr F.C. Jellesma, prof. dr P.F. de Jong, prof. dr S. Karsten, dr H.M.Y. Koomen, dr H. Kosar-Altinyelken, prof. dr D.A.V. van der Leij, dr R. Ligtvoet, dr M. Majdandžić, prof. dr M.S. Merry, prof. dr F.J. Oort, prof. dr G. Overbeek, dr T.T.D. Peetsma, prof. dr G.C.W. Rijlaarsdam, dr H.R. Rodenburg, dr J.A. Schuitema, prof. dr G.J.J.M. Stams, dr W. de Vente, prof. dr M.L.L. Volman, dr E.S. van Vugt, dr I.B. Wissink, dr A. Zand Scholten, dr B.J.H. Zijlstra.

7. Career prospects

After successful completion of the programme the student will receive a Research Master's degree in Child Development and Education, and the title Master of Science (MSc). Students are then qualified to apply for a vacant PhD project, to create their own PhD project by submitting a PhD project proposal, or to apply for a research grant. Students can also apply for a position in applied research, either in the public or the private sector. Research positions in, for example, the former division of Applied Research of the Kohnstamm Institute often result in a PhD as well. Positions in clinical research such as within UvA minds combine clinical practice with PhD research. Research positions outside the university can be found with commercial research bureaus, research departments of large companies and in government institutions.

8. Application requirements and admission criteria

Enrolment into the Research Master programme is restricted to a maximum of 15 students per year. The programme is meant for students with a bachelor's degree in pedagogical sciences or in educational sciences, but the programme is also accessible for students with an bachelor's degree in an adjacent study (e.g., in psychology, sociology) who want to specialise in research in child development and education. Both Dutch students and students from abroad can apply. All study materials are in English, and the language of instruction will be English as well.

Admission criteria

The following criteria are set for admission:

- A bachelor's degree or equivalent degree in pedagogical sciences, educational sciences, developmental psychology, or a related field (e.g., psychology, sociology).
- Basic knowledge of research methods and applied statistics in social and behavioural science research.
- Excellent study results, with marks in the top segment of graduation. Special importance is attached to the study results for research methods and statistics, research practicals and theses.
- Good writing skills, as indicated by written academic work (e.g., a paper or thesis).
- Sufficient active and passive proficiency in English, as indicated by a letter of motivation and the application interview. Non-native English speakers are required to take a test (but see Section 9 for exceptions).
- An active interest in research, as indicated by earlier study results, a letter of motivation and the application interview.
- The ambition to become a researcher, as indicated by a letter of motivation and the application interview.

Application requirements

Students who want to apply for enrolment in the Research Master Child Development and Education can obtain an application form at the office administration of the Graduate School of Child Development and Education. Alternatively, the student may download the application form from the web site: <http://www.uva.nl/en/education/master-s/master-s-programmes/item/educational-sciences-research.html>. If students have questions about the application procedure, they can contact the programme manager: rmcde@uva.nl.

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As early as possible, but no later than June 1st (for international students the deadline is May 1st), applicants must submit an application file consisting of the following documents:

1. Application: A completed application form.
2. Identity: A copy of your passport (identity page) or birth certificate.
3. Statement of purpose: A letter of motivation (about 500 words, in English) in which you explain why you wish to attend the programme and what your specific interests are (i.e., in what field(s) you want to specialise).
4. Academic transcript: A list of all university courses and examinations that you completed, with credits and grades. (For final admission, the applicant must submit *certified* transcripts, stamped and signed, sent in an envelope, closed and sealed by an authorised employee of the educational institute issuing the transcripts.)
5. List of courses in research methods and statistics: provide a description of the courses (content, literature) that you took as part of your former studies (this is not necessary for students who followed their bachelor programme at our department).
6. Written academic work: Provide an example of written academic work (e.g., a paper or thesis).
7. Curriculum vitae: A resume of your experience and skills in academic research, clinical work, or other work (if applicable; 2 pages maximum).
8. Letter of reference: One or more letters of reference; at least one letter should be from an academic staff member. We would appreciate the letter to include (a) the referee's name, title, address, telephone and e-mail address to enable the admissions committee to contact the referee, (b) information on the student's suitability for the research master programme Child Development and Education, and (c) information on the student's motivation, skills and ambition to become a researcher. Please ask the referent(s) to send the letter(s) of reference directly to the admissions committee. This may also be done by e-mail (rmcde@uva.nl).

In addition, foreign students should also include:

9. Diploma of secondary education (high school) with academic transcript.
10. English test results: Non-native English speakers must submit their test results of either the *International English Language Testing System* (IELTS), or the *Test of English as a Foreign Language* (TOEFL), or the *Cambridge International Examination* (see Section 9).
11. Application fee: Students whose application is based on a diploma from a university in a non-EU/EEA country have to pay an application fee of 100 euro (see Section 9). Please include either a copy of the bank draft, or a message stating the bank and the department (or person) responsible for making the money transfer.

If the application file is received before the first day of the month (e.g., May 1), the Admissions Committee will decide whether the applicant will be invited for an interview later that month, and the application will be decided before the end of the next month (e.g., June 30).

Admission procedure

The admissions committee consists of the programme director or programme manager and at least two other staff members. For each applicant, the admissions committee studies the application file, decides whether the application will be invited for an interview, and decides on the admission. The decision will be based on the above-mentioned criteria, and on the programme content of the applicant's preceding study or studies. In case of doubt, in particular with respect to knowledge of research methodology and statistics, or to the command of the English language, the admission committee may opt to apply relevant tests.



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9. Information specific for foreign students

Information especially for students from abroad can be found on the web site of the University of Amsterdam: <http://www.uva.nl/en/education/master-s/how-to-apply>. There you can find references to extensive information on financial matters, visas and permits, health insurance, housing, and more. Please notice that for some foreign students tuition fees are higher. Moreover, some foreign students have to pay an application fee, and some have to prove their proficiency in English. International students can contact the international office co-ordinator for assistance.

Tuition for students from abroad

The provisional tuition fees for the academic year 2013/2014 are € 1835 for European students (EU/EEA students) younger than 30 years and € 12000 for non-European students (non-EU/EEA students). See the website <http://www.uva.nl/en/education/master-s/finance/tuition-fees/tuition-fees.html> for up-to-date information. Costs of study materials may add up to approximately € 600.

Application fee

Students whose application is based on a diploma from a university in a non-EU/EEA country have to pay an application fee of 100 euro. The application fee is refundable for students who are admitted to the programme, after their arrival in Amsterdam.

You can transfer the application fee via the electronic bank transfer system using the BIC or SWIFT code (quoting (a) your name, (b) “application fee for research master Child Development and Education”, and (c) “code: R.2533.0503.01”):

UVA, Afdeling POWL
Address: Nieuwe Prinsengracht 130
Zip code/City: 1018 VZ Amsterdam
Name of the Bank: Deutsche Bank
Zip code/City: 1101 HE Amsterdam
Country: The Netherlands
SWIFT CODE /BIC code: DEUTNL2N
IBAN (International Bank Account Number): NL82DEUT0471645311
Account number: 47.16.45.311

Please make sure that your name is clearly stated. It is recommended to do a routine check of bank drafts afterwards to see if your money ended up in the right account with the right name attached to it. Please include in your application file a copy of the bank draft, or a hand-written message stating the name of the bank and the department (or person) responsible for making the money transfer.

Proficiency in English

All international applicants who are non-native English speakers are required to demonstrate sufficient proficiency in English to enrol in university-level courses. Students must be able to read textbooks, understand lectures, take part in classroom discussions and undertake written work in English. Non-native English speakers must prove their proficiency in English by submitting their test results for one of the English language tests listed below. However, non-native English speakers who have successfully finished an English-taught programme at university level are released from this obligation. Dutch students with a “VWO-diploma” do not have to take an English test either.



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Applicants should submit the results on one of the following tests:

- *International English Language Testing System (IELTS)*. Students are required to have a score of at least 6.5 (on the academic module).
- *Test of English as a Foreign Language (TOEFL)*. Students are required to have a score of at least 92 (internet based test).
- *Cambridge International Examination*. Students are required to have a minimum score 'A/B' for the Certificate in Advanced English (CAE), 'B/C' for the Certificate of Proficiency in English (CPE).

No other tests are accepted. The IELTS is the recommended test for students from China as this test is required for their visa application. Original test results should be included in the application file, or sent by the testing institution to the Admissions Committee directly.

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10. Course descriptions

On the next pages, course descriptions are given in the following order:

Introductory course:

- Bioecological models: State-of-the-art

Disciplinary courses:

- Childhood education, family support and development
- Learning and social-emotional disorders in educational contexts
- Developmental and parenting problems: aetiology and intervention
- Micro-processes at school and learning
- Foundations and philosophy of education
- Criminal behaviour of juveniles and the juvenile justice system
- Dyslexia
- Distal and proximal processes in educational research

Courses in methods and statistics:

- Methods and statistics in educational research
- Structural equation modelling
- Multilevel data analysis
- Longitudinal data analysis

Supporting course:

- Academic skills: Writing and presenting

Research projects:

- Thesis 1
- Thesis 2

Introductory course

- Name:* Bioecological models: State-of-the-art
- Lecturers:* prof. dr. D.A.V. van der Leij
- ECTS, period:* 6 credits, September - October
- Objectives:*
- Knowledge and understanding*
- The students gather profound theoretical knowledge of:
- recent developments in bioecological models
 - the findings of relevant examples of studies supporting a model;
 - and the designs and instruments used.
- Applying knowledge and understanding*
- Discussing the theoretical and methodological qualities of the various studies improves the understanding of the assumptions underlying the research of pedagogical or educational topics.
- Making judgments*
- In addition to ethical aspects of studying sensitive topics (e.g. child abuse, psychopathological development), the implications of research results for the practice of raising children and education will be discussed in order to improve the judgment of practical relevance.
- Communication*
- During and at the end of the course, the students report and present reviews and critical reflection of research in English to the participants of the course.
- Learning skills*
- Discussing the theoretical and methodological assumptions of research in a bio-ecological perspective aims to improve the students' ability to develop research proposals.
- Content:* Recent developments with respect to models that describe the interaction between individual characteristics, environment and development are discussed. 'Classical' bioecological models are compared to genetic behaviour and dynamic systems models. Attention will be paid to both individual characteristics such as learning (dis)ability, temperament, developmental disorders, and to relevant variables of the proximal and distal environment (parents, peers, teachers, family, class, child care, youth care, school). The contribution of genetic and environmental influences will be illustrated by findings of twin-studies.

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- Literature:* Academic journal articles. For example:
- Bronfenbrenner, U., & Ceci, S.J. (1994). Nature-nurture reconceptualized in developmental perspective: A bioecological model. *Psychological Review*, 101, 568-586.
 - Thelen, E., & Smith, L.B. (1994). *A Dynamic Systems Approach to the development of Cognition and Action*. Cambridge, MA: MIT Press.
 - Walker, S.O., Petrill, S.A., & Plomin, R. (2005). A genetically sensitive investigation of the effects of the school environment and socioeconomic status on academic achievement in seven-year-olds. *Educational Psychology*, 25 (1), 55-73.
- Format:* Eight-week tutorial with one meeting each week.
- Examination:* Weekly assignments, final paper, and presentation

Disciplinary course 1

- Name:* Childhood education, family support and development
- Lecturers:* dr. H. Bos, dr. R. Fukkink
- ECTS, period:* 6 credits, February - March
- Objectives:*
- Knowledge and understanding*
Students gather knowledge of:
- recent developments in theories about the interaction between individual development and parenting;
 - interventions and facilities aimed at improvement;
 - the findings of relevant examples of studies supporting a model;
 - the designs and instruments used.
- Applying knowledge and understanding*
- Students are able to formulate a research question and formulate hypotheses about one of the topics in the research group Childhood Education: (1) family support, (2) parenting and child development in non-traditional families, (3) childcare centre and (4) minority education, religion/cultural identity issues.
- Communication*
- This should result in a paper in which students integrate their research question and hypotheses in theoretical frameworks used on the research in the research group. The paper will be presented in the group.
- Content:* In this course students will get involved into the research-projects of the programme 'Childhood Education and Family Support'. Aims, means, results, and theoretical and social background of various projects will be discussed with the lecturing researchers and PhD-students.
The focus is on child development and raising children within traditional and

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non-traditional families, such as patchwork families, lesbian parent families, and “new reproductive technology families”. Special attention is given to family relationships (cf. siblings). Besides this, day care centres are considered another setting of proximal environment of the developing young child. Child characteristics discussed are social adjustment, cognitive development, gender orientation and temperament. Also, specific attention is given to the wider social context in which one lives. In this respect cross-cultural differences (cf. parental/day care staff belief systems) are taken into account.

- Literature:* Academic journal articles and research proposals
Format: Eight-week tutorial with one meeting each week (Wednesday morning)
Examination: Weekly assignments and a final paper

Disciplinary course 2

- Name:* Learning and social-emotional disorders in educational contexts
Lecturers: dr. P.F. de Jong, dr. H.M.Y. Koomen
ECTS, period: 6 credits, February - March
Objectives:
- Knowledge and understanding*
- Knowledge and understanding of important concepts (disorders, special educational needs, comorbidity, treatment integrity and effectiveness) related to learning, socioemotional, and behavioral problems in an educational context
 - Knowledge and understanding of main theories, empirical findings and research methods on learning disorders, socioemotional problems, and teacher-student interactions c.q. relationships
 - Knowledge and understanding of the role of teacher-student interactions in (academic, socioemotional, and behavioral) school adjustment, especially for students with learning disorders and socioemotional problems
 - Knowledge and understanding of assessment methods and measuring instruments for various learning disorders and aspects of teacher-student interactions c.q. relationships
 - Knowledge and understanding of effective treatments of various learning disorders and socioemotional problems and of interventions to promote teacher-student interactions c.q. relationships
- Application of knowledge and understanding*
- Ability to apply different theoretical perspectives and findings from empirical research to (the assessment and treatment of) learning and socioemotional problems of children and interactions with teachers in specific educational contexts

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Judgment

- Ability to judge assessment quality and effectiveness of treatment methods for various learning disorders and aspects of teacher-student interactions c.q. relationships

Content:

- The study of specific problems in basic skills: (a) development of basic skills and how learning processes cause individual differences, (b) developmental dyslexia, its precursors (in genetics, neuro-biology and linguistics), and its prevention, intervention, and treatment, (c) differences within and between learning disabilities (dyslexia, arithmetic disability, comprehension problems) and relationships with other developmental disorders (co-morbidity).
- The study of specific problems in social-emotional functioning: (a) how young students cope with internal and external threats to emotional security, how teacher support affects social-emotional functioning and learning behaviour, in particular of children with social-emotional problems such as internalising or externalising behaviour, and (b) the relation between social-emotional functioning and school achievement, with focus on motivation, self-confidence, and psycho-social development.
- Special educational needs: development and evaluation of instruments and methods for adaptation of instruction and guidance to special educational needs

Literature:

Academic journal articles. For example:

- de Jong, P.F., & van der Leij, A. (1999). *Journal of Educational Psychology*, 91, 450-476; Eden, G., et al. (2004). *Neuron*, 44, 411-412.
- Gazelle, H. & Ladd, G.W. (2003), *Child Development*, 74, 257-278.
- Meehan, B.T., Hughes, J.N., & Cavell, T.A. (2003), *Child Development*, 74, 1145-1157.
- Paracchini et al. (2007), *Annual review of genomics and human genetics*, 8, 57-79.
- Pualakanaho, A., et al. (2007), *Journal of Child Psychology and Psychiatry*, 48, 923-931.
- Swanson, H.L. & Hoskyn. M. (1999); *School Psychology Review*, 28, 644-658.

Format:

Eight-week tutorial with one meeting each week.

Examination:

Weekly assignments, research proposal, and presentation

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Disciplinary course 3

- Name:* Developmental and parenting problems: Aetiology and intervention
- Lecturers:* prof. dr. S. Bögels
- ECTS, period:* 6 credits, November - December
- Objectives:* Knowledge of:
- current theories and models with respect to the aetiology, secondary prevention and treatment of developmental psychopathology;
 - evidence-based intervention into developmental psychopathology;
 - current developments of research into developmental psychopathology;
 - ability to critically evaluate a research paper and a research proposal into the area of developmental psychopathology.
- Content:* This course focuses on developmental psychopathology, such as anxiety, behavioural disorders, sleep problems, childhood chronic illness, and addiction and its interaction with parenting. We will focus on recent theoretical developments in this field, such as cognitive developmental models of childhood psychopathology, differential susceptibility for parenting influences, and the specific role of the father in the intergenerational transmission of psychopathology. Furthermore, we will focus on recent trends in gene-environmental interactions in relation to psychopathology. New developments in the intervention of developmental and parenting problems, like Family Cognitive Behaviour Therapy and Mindful Parenting, are outlined. Specific attention will be paid to evidence-based youth care.
- Literature:* Examples:
- Belsky, J. (2005). Differential susceptibility to rearing influence: An evolutionary hypothesis and some evidence. In: B.J. Ellis and D.F. Bjorklund (Eds.), *Origins of the social mind: Evolutionary psychology and child development* (pp. 139-163). NY: The Guilford Press.
 - Bögels, S.M. & Brechman-Toussaint, M. (2006). Family factors in the aetiology and maintenance of childhood anxiety: Attachment, family functioning, rearing, and parental cognitive biases. *Clinical Psychology Review*, 26, 834-856.
 - Brown, R.T., Daly, B.P. & Rickel, A.U. (2007). Chronic illness in children and adolescents. Cambridge: Hogrefe & –Huber Publishers. ISBN: 978-0-88937-319-8.
 - Rodenburg, R., Meijer, A.M., Dekovic, M. & Aldenkamp, A.P.(2005). Family factors and psychopathology in children with epilepsy: A literature review. –*Epilepsy and behavior*, 6, 488-503.
 - Sternberg, R.J. (2005). Reviewing scientific works in psychology. APA-books, ISBN: 1-59147-281-4.

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Applied and theoretical papers will be made available through Blackboard (as PDF files) or can be downloaded from the Digital Library (Digitale Bibliotheek) of the University of Amsterdam.

Format: Eight-week tutorial with one meeting each week.

Examination: Weekly assignments and review of research proposal

Disciplinary course 4

Name: Micro-processes at school and learning

Lecturer: dr. T.T.D. Peetsma, prof. dr. M.L.L. Volman

ECTS, period: 6 credits, November - December

Objectives: *Knowledge and understanding*

- Knowledge of (recent developments in) theories and models of the influence of school, teaching practices and society on the micro-level of student learning and development
- Knowledge of interventions aimed at the improvement of motivation for school and at meaningful learning in diverse learning contexts.
- Knowledge of the findings of relevant examples of studies and the designs and instruments used
- Understanding of the assumptions underlying the study of micro-processes in education.

Applying knowledge and understanding

- Ability to apply this knowledge in research on interventions at school (e.g. interventions in teaching practices, motivation for learning and inclusion of sen students).

Making judgments

- Ability to judge the relevance and implications of research results for further research on education and for the practice of education

Communication

- Ability to develop research proposals, and to design research and develop instruments to be used in this domain of research.
- Ability to report a research proposal and to present critical reflections on the research and research proposals in English to the participants of the course.

Content: In this course on micro-processes, recent developments in studies on student learning and development in the context of the school and the classroom will be reflected upon.

The focus will be on the complex interplay of cognitive, social, motivational and emotional development in the context of the school, families, peers and society at large. The critical roles played by the characteristics of schools, like student grouping, pedagogical approaches, curriculum, school climate

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and the teachers, in mediating individual and cultural characteristics of students will also be a focus of the course.
(Quasi) experimental studies, intervention studies, and review studies will be discussed.

Format: Eight-week tutorial with one meeting each week.

Literature: A compilation of journal articles on recent developments in the research field. The literature will be provided during the meetings or on Blackboard.

Disciplinary course 5

Name: Foundations and philosophy of education

Lecturers: prof. dr. M.S. Merry

ECTS, period: 6 credits, September - October

Objectives: *Knowledge and understanding*

- Students will encounter philosophical texts that examine complex and challenging issues within the domain of educational theory and practice.

Applying knowledge and understanding

- Students will learn to recognize the structure of argumentation and be able to condense longer and more complex arguments into syllogisms.

Making judgments

- Students will develop analytical skills through close reading of philosophical texts. These include the capacity to critically examine the arguments advanced by different authors, exposing potential weaknesses in the premises and conclusions.

Communication

- Students will learn how to argue their positions both verbally and in writing using argumentation and evidence.

Learning skills

- Students will take up an independent research project in which the aim is then to present the ideas in a philosophical manner using one of the following approaches: critical reflection, critique, or defence.

Content: The content for this course will be determined based on student need. Philosophical readings will be assigned based on the research interests of the participants.

Literature: To be determined.

Format: Classes will be held once a week for the duration; individual supervision by appointment.

Examination: Philosophical paper and discussion with professor.

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Disciplinary course 6

- Name:* Criminal behaviour of juveniles
- Lecturers:* prof. dr. G.J.J.M. Stams, dr. J.J. Asscher
- ECTS, period:* 6 credits, September - December
- Objectives:* Knowledge of:
- recent developments in theories and models of the development of criminal behaviour of juveniles, and of
 - prevention and treatment;
 - the findings of relevant examples of studies supporting a model;
 - and the designs and instruments used.
- Content:* The first part of this course focuses on the prevalence and ethology, and the measurement of criminal behaviour of children and juveniles. Also, various explanatory theories and models of crime will be discussed with a special emphasis on developmental and life-course approaches. The second part concentrates on the system of societal reactions to juvenile crime, prevention and intervention programmes in use, and their effectiveness. Special attention will be paid to the so-called What Works-principles.
- Literature:* Examples:
- Loeber, R. & D.P. Farrington (eds.) (1998). *Serious & violent juvenile offenders. Risk factors and successful interventions.* Thousand Oaks: Sage
 - Loeber, R. & D.P. Farrington (eds.) (2001). *Child delinquents. Development, intervention sand service needs.* Thousand Oaks: Sage.
- Format:* Classes once a week; individual supervision by appointment
- Examination:* Individual paper

Disciplinary course 7

- Name:* Dyslexia
- Lecturers:* dr. P.F. de Jong
- ECTS, period:* 6 credits, November - December
- Objectives:* *Knowledge and understanding*
- Knowledge and understanding of the main theories on reading acquisition and dyslexia
 - Knowledge and understanding of biological and cognitive precursors of dyslexia
 - Knowledge and understanding of the conceptual underpinnings of current practices in the diagnosis of dyslexia and its comorbid disorders

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- Knowledge and understanding of the theories and aims of a broad range of school and clinical interventions for dyslexia
- Knowledge and understanding of the methods to determine the effectiveness of large and small-scale interventions for dyslexia

Applying knowledge and understanding

- Ability to apply various theories and empirical findings on dyslexia in the diagnosis of the disorder
- Ability to apply theories and empirical findings in the design of interventions for dyslexia and individual clinical treatment

Making judgements

- Being able to critically evaluate the various opinions on the proper diagnosis of dyslexia
- Being able to critically evaluate the levels of evidence for the multitude of interventions and individual treatments of dyslexia.

Learning skills

- To obtain a knowledge base and understanding of the main topics in the etiology, diagnosis and treatment of dyslexia that enables independent future study on the scientific development of dyslexia needed to function as a science practitioner.

Content: Current (computational) models of skilled reading will be discussed as well as recent theories about the neurobiological and cognitive foundations of the normal and deviant development of reading. Attention is paid to the influence of genetics, to behavioural manifestations of dyslexia and the possible reasons for its comorbidity with other disorders, such as ADHD and dyscalculia. The extensive research on the prevention and treatment of dyslexia will be critically examined.

Literature: Examples:

- Coltheart, M. (2005). Modeling reading: The dual-route approach. In S. J. & C. Hulme (Eds.), *The science of reading: A handbook* (pp. 6-23). Oxford, UK: Blackwell.
- Torgesen, J. K. (2005). Recent discoveries from research on remedial interventions for children with dyslexia. In M. J. Snowling & H. C. (Eds.), *The science of reading: A handbook*. Oxford, UK: Blackwell.
- Ziegler, J. C., & Goswami, U. C. (2005). Reading acquisition, developmental dyslexia, and skilled reading across languages: A psycholinguistic grain size theory. *Psychological Bulletin*, *131*, 3-29.
- de Jong, P.F, & van der Leij, A. (2003). Developmental changes in the manifestation of a phonological deficit in dyslexic children learning to read a regular orthography. *Journal of Educational Psychology*, *95*, 22-40.

Format: Classes once a week; individual supervision by appointment

Examination: Individual paper

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Disciplinary course 8

- Name:* Distal and proximal processes in educational research
- Lecturers:* prof. dr. S. Karsten
- ECTS, period:* 6 credits, February - March
- Objectives:*
- Knowledge and understanding*
 - Knowledge and understanding of recent developments in theories and models of the influence of institutional and school factors on learning and development (e.g. assessment policies, standardization, accountability systems, school and classroom composition),
 - Applying knowledge and understanding*
 - Applying this knowledge and showing problem solving abilities in common interventions at school and local level (e.g. school improvement interventions, class size reduction, introduction of merit pay, professionalization activities)
 - Making judgments*
 - Making judgments of pros and cons of certain interventions based on research evidence.
 - Communication*
 - Having communication competences to address professional, political and lay audiences about the merits of certain interventions and the research evidence related to that intervention.
 - Learning skills*
 - Having the learning skills to improve both one's own practice and the research community, i.e. being able to design research and develop instruments that can be of use in this domain.
- Content:* Recent developments in theories and models of the influence of institutional and school factors on learning and development (e.g. assessment policies, standardization, accountability systems, school and classroom composition) are discussed.
- Literature:* To be determined.
- Format:* Eight-week tutorial with one meeting each week.
- Examination:* Individual paper

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Course 1 in methods and statistics

Name: Methods and statistics in educational research

Lecturers: dr. R.G. Fukkink, dr. A. Zand Scholten (TA)

ECTS, period: 12 credits, September - December

Objectives: *Knowledge and understanding*

Knowledge of:

- the most commonly used statistical (GLM) techniques in educational research;
- how to apply these techniques to real data sets with the computer program SPSS;
- how to report statistical analyses and the results in scientific articles;
- how to read, understand, and interpret scientific articles in which the techniques are used.
- The students should demonstrate knowledge and understanding of statistical techniques from the general linear model (see the course outline for a description of the various techniques).

Applying knowledge and understanding

- can apply their knowledge and understanding in preparing datafiles for statistical analysis (data cleaning, transforming variables)
- can apply their knowledge and understanding in analyzing empirical data from correlational and experimental designs

Judgments

- can formulate judgments with regard to the outcomes of multivariate statistical analyses

Communication

- can report conclusions in a concise format, written in academic English

Learning skills

- have the learning skills to combine guided and autonomous learning in this domain

Content: The course starts with a short review of common experimental and quasi-experimental research designs, and associated types of analysis of variance (ANOVA). The general linear model is introduced as the general model that subsumes both ANOVA and regression analysis. Multiple regression analysis and MANOVA are treated extensively. Next, the generalised linear model is introduced as the even more general model that also subsumes logistic regression analysis and log linear modelling, which techniques are also treated extensively. Effect size indices and statistical power will be discussed for all mentioned statistical techniques. Through practical assignments, students not only learn how to apply the statistical techniques, but also how to prepare and screen data, and how to handle commonly encountered problems such as missing values, outliers, non-normality, heteroscedasticity, multicollinearity, inflated family-wise error rates, etc. Articles from educational research journals are used to illustrate how the

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statistical techniques are applied and described in the scientific literature, and how the results can be reported and interpreted.

- Literature:*
- Tabachnick, B.G. & Fidell, L.S. (2007). *Using Multivariate Statistics*, 5th ed. Boston: Allyn & Bacon, € 79,-.
 - Applied papers: Academic journal articles with applications of multivariate statistical techniques to substantive research questions in educational research.
 - Instructive papers: Academic journal articles about methods and statistics in educational research.
- Format:* Lectures and practical sessions.
- Examination:* Practical assignments, writing assignments and individual paper

Course 2 in methods and statistics

- Name:* Structural equation modelling
- Lecturers:* Prof. dr. F.J. Oort, drs. S. Jak (TA), drs. M. van den Boer (TA)
- ECTS, period:* 12 credits, September - December
- Objectives:*
- Knowledge and understanding*
- Students obtain thorough knowledge of structural equation modelling (SEM) and its special cases path analysis and factor analysis. Understanding of the statistical theory on which SEM is based.
 - In addition to the common applications of SEM to cross-sectional, continuous, multivariate-normally distributed data, students also learn how to apply SEM to multigroup data, longitudinal data, non-normal data, and (other) discrete data.
 - Students learn to use a computer program for the application of SEM and the skill to use it with various sets of data (small and large; cross-sectional, multigroup, and longitudinal; correlational and experimental; continuous and discrete).
- Applying knowledge and understanding*
- Technically, students learn how to apply SEM to various sets of data with various characteristics. Substantively, students learn how to apply SEM to substantive research questions in the behavioural and social sciences, specifically in child development and education.
- Making judgments*
- Students learn when and how to apply SEM and how to interpret SEM results, but they also learn the pitfalls of SEM, and to question the application and results of SEM.
- Communication*
- Students learn how to write the statistical analysis and results

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sections in scientific papers, and how to report their SEM results in text, tables and figures.

Learning skills

- Students learn to read, understand, and interpret scientific articles in which SEM is applied. They are also able to critically evaluate and criticise the way in which SEM is applied to investigate substantive research questions.

Content:

The course starts with a historical overview and separate treatment of path analysis and factor analysis of covariance structures. Subsequently, the full structural equation model with latent variables is treated in depth. Next, the model is extended with mean structures, and models for multiple group data and longitudinal data are discussed, with special attention to the topic of measurement invariance. Model specification, identification, estimation, goodness of fit, and interpretation will be discussed. In addition, sample size considerations, effect size indices, and statistical power are discussed for testing hypotheses of overall goodness of fit, as well as for testing hypotheses regarding specific model parameters.

Through practical assignments, students learn how to prepare their data (and handle missing values), and how to use a computer program for structural equation modelling (either LISREL, M-PLUS, or MX). Articles from educational research journals are used to illustrate how structural equation modelling (SEM) is applied and described in the scientific literature, and how to report and interpret the results.

Literature:

- Kline, R.B. (2004). *Principles and Practice of Structural Equation Modeling*, 2nd ed. New York: The Guilford Press, € 52,95.
- Applied papers: Academic journal articles with applications of structural equation modelling to substantive research questions in educational research.
- Instructive papers: Academic journal articles about structural equation modelling.

Format:

Twelve-week tutorial with two meetings each week.

Examination:

Practical assignments, individual paper, and a written exam

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Course 3 in methods and statistics

- Name:* Multilevel Data Analysis
- Lecturers:* dr. B.J.H. Zijlstra
- ECTS, period:* 6 credits, February - March
- Objectives:*
- Knowledge and understanding*
 - Knowledge of multilevel regression models.
 - Understand how multilevel regression models can contribute to establishing a more valid connection between a model and the properties of observed data.
 - Applying knowledge and understanding*
 - How to apply multilevel regression models to real data sets using software.
 - How to read, understand, and interpret scientific articles in which multilevel regression analyses are applied.
 - Communication*
 - How to report multilevel regression analyses and the results in scientific articles.
- Content:* Data gathered in educational research are often hierarchically structured, as subjects may share the same family, group, classroom, school, childcare centre, etc. After explaining clustered data, multilevel models are introduced with random intercept models. Subsequently, the specification of more complicated models is discussed, with and without random slopes, and with and without interaction effects. Specification searches, the testing of fixed and random slopes, and the testing and interpretation of interaction effects are treated extensively. Finally, attention will be paid to the statistical power of the analysis of data in multilevel designs. Through practical assignments, students learn how to conduct the analyses of multilevel data. Articles from educational research journals are used to illustrate how multilevel modelling is applied and described in the scientific literature, and how the results can be reported and interpreted.
- Literature:* To be announced.
- Format:* Eight-week tutorial with two meetings each week.
- Examination:* Practical assignments, individual paper, and a written exam

Course 4 in methods and statistics

- Name:* Longitudinal Data Analysis
- Lecturer:* prof. dr. F.J. Oort, dr. R. Ligtoet (TA)
- ECTS, period:* 6 credits, February - March
- Objectives:* *Knowledge & understanding*

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- Acquire knowledge and understanding of (M)ANOVA and multilevel techniques for the analysis of longitudinal data.

Applying knowledge & understanding

- Apply these techniques to real data using available computer software.

Making judgements & communication

- Judge the implications of the results for the research problem at hand, and report the results of the analysis in accordance with scientific journal standards.

Learning skills

- Being able to critically read scientific articles where these techniques have been applied.

Content:

The course starts with a repetition of how longitudinal data are analysed through repeated measures analysis of variance. Next, various longitudinal structures are explained by reviewing structural equation models for longitudinal data (e.g., compound symmetry models, autoregressive models, and latent curve models). For most part, the course focuses on multilevel analysis of longitudinal data. Attention will be divided equally between fixed occasion models and random occasion models (with linear and non-linear latent curves). For both types of models, specification searches are discussed, with and without time-varying covariates, and with different covariance structures. Application of multilevel logistic models to discrete data will also be discussed. Special attention will be paid to attrition of subjects in longitudinal studies and how this problem is addressed in multilevel analysis.

Through practical assignments, students learn how to use computer programs SPSS and MLWIN for the analysis of longitudinal data. Articles from educational research journals are used to illustrate how multilevel models for longitudinal data are described in the scientific literature, and how the results are reported and interpreted.

Literature:

- Selected chapters from Tabachnick & Fidell (2007), Kline (2004), and Snijders & Bosker (1999).
- Applied papers: Academic journal articles with applications of longitudinal data analysis techniques to substantive research questions in educational research.
- Instructive papers: Academic journal articles about longitudinal data analysis in educational research.

Format:

Eight-week tutorial with two meetings each week.

Examination:

Practical assignments, individual paper, and a written exam

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Supporting course

- Name:* Academic skills: writing and presenting
- Lecturer:* dr. H. Bos
- ECTS, period:* 3 credits, May - June
- Objectives:* This course will give students the necessary skills in order to:
- write a paper within the APA format and conventions
 - develop or improve their abilities to communicate findings in written English
 - give a successful presentation during the class
 - answering questions after submission of a paper and after an oral presentation
 - how to review a paper & write a review
 - present at a symposium an oral or poster presentation
 - write their first RM thesis
- Content:* The course focuses on practical skills, gives an in-depth overview of the APA publication manual and incorporates a series of concrete tasks (writing and presenting) in small group sessions. Students will also be introduced to multi-media techniques.
- The course consists of three parts. In the first part students will learn the basic principle of academic writing. In this part students will also be introduced to the computer programme *Endnote*. The second part will focus on drafting, editing and rewriting of academic texts and papers. In this part students will be given the opportunity to submit their own written work, to receive feedback, and to rewrite and resubmit an improved text. In the third part students will be taught how to present their work through oral presentations and poster presentations.
- Literature:*
- *APA Publication Manual* (fifth edition). Washington: American Psychological Association. ISBN: 1-55798-791-2; \$26.95
 - Gelfand, H. & Walker, C. J. (2001). *Mastering APA Style: Student's Workbook and Training*. Washington: American Psychological Association. ISBN: 1-55798-891-9; \$ 24.95
 - Reader Critical thinking about research
 - Reader Instruction to Endnote
- Format:* Six-week tutorial with one meeting each week.
- Examination:* Individual paper (part of first thesis) and classroom presentation

Research project 1

- Coordinator:* Prof. dr. F.J. Oort
- ECTS, period:* 21 credits, January - June
- Objectives:* *Knowledge and understanding*

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- Students gain more in depth knowledge of the specific field of study that they choose for their thesis subject.
- They develop their own ideas about their research subject.
- If necessary they also learn new methods of research and statistical techniques to investigate their ideas.

Applying knowledge and understanding

- Students apply knowledge and skills that they learned in the research master classes, as well knowledge and skills from independently found sources of knowledge. They use their new knowledge and skills to design, execute and report research independently.

Making judgments

- Students can interpret the results of their research, also in the context of theoretical and empirical research reported by others in the scientific literature.
- In addition, they can judge the relevance of their research results for the scientific field of child development and education, as well as for society.

Communication

- Students report their research to the academic community through scientific papers and presentations, but also to a more general public.

Learning skills

- During their thesis work, students often work in teams and they learn that cooperation, openness and honesty are as important as knowledge and skills, in order to be able to achieve the best possible skills.
- Through their thesis work, students further develop the skills to study and conduct research autonomously.
- They are open to criticism and can form an independent opinion of their own work and the work of others.

Content: The student conducts research on a topic within the field of pedagogical and educational sciences. Students have the opportunity to choose their own subject, as long as it fits in with one of the research programmes of the Graduate School. The student asks one of the members of the research master staff to supervise him or her. The student's research can have multiple supervisors, but at least one of them must be research master staff.

Literature: To be determined in consultation with the supervisor.

Format: Individual supervision by one or more supervisors. In addition, several 'thesis meetings' are organized during the year.

Examination: Research report.

Research project 2

Name: Thesis 2: Second year research project

Coordinator: Prof. dr. F.J. Oort

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ECTS, period: 30 credits, September - June

Objectives: *Knowledge and understanding*

- Students gain more in depth knowledge of the specific field of study that they choose for their thesis subject.
- They develop their own ideas about their research subject.
- If necessary they also learn new methods of research and statistical techniques to investigate their ideas.

Applying knowledge and understanding

- Students apply knowledge and skills that they learned in the research master classes, as well knowledge and skills from independently found sources of knowledge. They use their new knowledge and skills to design, execute and report research independently.

Making judgments

- Students can interpret the results of their research, also in the context of theoretical and empirical research reported by others in the scientific literature.
- In addition, they can judge the relevance of their research results for the scientific field of child development and education, as well as for society.

Communication

- Students report their research to the academic community through scientific papers and presentations, but also to a more general public.

Learning skills

- During their thesis work, students often work in teams and they learn that cooperation, openness and honesty are as important as knowledge and skills, in order to be able to achieve the best possible skills.
- Through their thesis work, students further develop the skills to study and conduct research autonomously.
- They are open to criticism and can form an independent opinion of their own work and the work of others.

Content:

The student conducts research on a topic within the field of pedagogical and educational sciences. The student chooses a subject of research and invites one of the members of the research master staff to supervise him or her. The student's research can have multiple supervisors, but at least one of them must be a research master staff member.

After agreeing on supervision and the subject of research, the student writes a thesis plan and research proposal. Two other staff members (one of whom may be replaced by a subject matter expert), not otherwise involved in the student's research project, must approve the research proposal before the student can continue the research activities.

The proposed research project can be carried out within one of the research groups of the department, but it can also be carried out outside the department, possibly at another university. The student works autonomously, consults supervisors and others when appropriate, and participates in the



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research group of the supervising staff member. The full research project may be described in an internal research report, but the student must also present the research results in a paper that can be submitted to an international, peer-reviewed academic journal.

- Literature:* To be determined in consultation with the supervisor.
- Format:* Individual supervision by one or more supervisors. In addition, several ‘thesis meetings’ are organized during the year.
- Examination:* Paper that can be submitted to an international, peer-reviewed academic journal. Thesis 2 will be graded by the student’s supervisor(s) as well as by two research master staff members who did not take part in the supervision (one of the research master staff members may be replaced by a subject matter expert).