COURSE MANUAL

DUAL WORK PERIOD BUSINESS ANALYTICS

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1 Introduction

This handbook is intended primarily for current and prospective students of the Business Analytics dual master's program. It serves as a practical guide to the Dual Work Period, a key component of the program.

The dual master's program spans two years. During the first sixteen months, students split their time equally between academic study and professional work. The final six months are dedicated to the Master Project Business Analytics, which serves as the graduation project.

This structure closely resembles a traditional "sandwich course," where academic learning and professional experience are fully integrated. As a dual student, you are both an employee and a student: you will be on the payroll of a host organization, contributing to work that aligns directly with your academic focus, while also attending lectures, completing coursework, and taking exams.

Should you be offered a position with the host organization after graduation and choose to accept it, you will already have a deep understanding of the organization's operations and culture. Likewise, the organization will be well-acquainted with your skills and potential.

It is entirely feasible to complete the dual master's program, including the graduation project, within the standard two-year timeframe.

For further information:

- For questions about the Dual Work Period, please contact the <u>dual coordinator</u>.
- For inquiries regarding the overall dual master's program, please reach out to the <u>master coordinator</u>.

2 Distinguishing the Dual Work Period from the Master Project internship

In the final phase of the Business Analytics dual master's program, students complete an integrated internship — the *Master Project Business Analytics*. While the *Dual Work Period* may appear similar to the *Master Project Business Analytics* internship, there are several key differences:

- Employment Status: During the *Dual Work Period*, students are typically employed by the host organization under a fixed-term employment contract, making them official employees on the company's payroll. In contrast, internship students are engaged under the UNL internship agreement and do not hold employee status.
- **Nature of Work**: Dual students are actively involved in the organization's core business processes, contributing to ongoing operations. Interns, however, often work on standalone assignments that may only become relevant to the organization in the future.
- Collaboration and Responsibility: Dual students frequently work in team settings, where individual contributions may be integrated into broader group outcomes. Interns are more likely to work independently, with clearly defined personal deliverables.
- **Duration and Flexibility**: The *Dual Work Period* has a fixed duration as part of the structured program. The internship, however, may be extended—typically by up to two months—if additional time is needed to complete the project.
- Assessment Criteria: Evaluation of the *Dual Work Period* places significant emphasis on the student's performance within the company. In contrast, the internship is assessed primarily based on the quality and content of the final report.

3 Content of the Business Analytics Dual Master's program

The Business Analytics dual master's program combines academic study with relevant parttime employment. The work must align with the program's content, and the Dual Work Period is worth 12 ECTS.

Often, students complete their Master Project in Business Analytics (36 ECTS) at the same organization, creating a seamless link between work and study. Together, these components contribute 48 ECTS of work-related credit.

The Master Project takes place in the final phase and results in a written report. Students may begin only after completing the Research Seminar (6 ECTS) and all other courses, except possibly one. Those starting in January should consult the Study Guide for specific conditions.

To graduate, students must earn at least 72 ECTS from coursework, including the Research Seminar. The total program workload is 120 ECTS.

Program Tracks

Students can tailor their studies by choosing one of the following three tracks:

- Optimization of Business Processes
- Risk Management
- Computational Intelligence

It is advisable to select a track that aligns with your professional role and long-term career goals.

The curriculum is designed to strike a balance between foundational knowledge essential for professional success and cutting-edge developments in the field. Courses are regularly updated, and new offerings are introduced to reflect current trends in business analytics.

Important Notes

- Program Approval: All study plans, including elective course selections, must be discussed with the <u>master coordinator</u> and approved by the <u>Examination Board</u>.
- Work Placement Approval: Every Dual Work Placement must be approved by one of the designated dual program instructors. If you have secured a suitable dual work position, please submit your Dual Work Period proposal to the <u>Dual Work Period</u> <u>coordinator</u>, preferably before June 1, 2025.
- Further Information: Please refer to the online <u>Study Guide</u> for the most up-to-date program details and requirements.

4 Admission

To apply for the Business Analytics dual master's program, the university will assess your prior education and experience to identify any knowledge gaps. The admission requirements are the same as for the professional master's program. In addition, you must have an approved dual workplace at the start of your studies, which you are personally responsible for securing.

Applicants with a bachelor's degree in Business Analytics are automatically eligible. Those with degrees in related fields (e.g., Mathematics, Computer Science, Econometrics) or a higher professional education diploma (Dutch HBO or equivalent) will be assessed individually. In some cases, a pre-master's program may be required to address knowledge gaps, especially if your background differs significantly from the Business Analytics profile. Consultation with the <u>admission coordinator</u> is essential in such cases.

Admission to the dual program also depends on securing suitable employment. Vrije Universiteit Amsterdam collaborates with several companies interested in hosting dual students and may offer guidance or suggest potential contacts. However, it remains the student's own responsibility to actively search for and secure a suitable dual workplace.

In addition to meeting academic requirements, your dual workplace must be approved. To do this:

- 1. Email a written proposal to the Dual Work Period coordinator.
- 2. The coordinator will assign a Dual Work Period supervisor.
- 3. Request approval from the assigned Dual Work Period supervisor.
- 4. Once approved, forward the confirmation and proposal to the <u>Dual Work Period</u> <u>coordinator</u>.

After approval, you will receive practical information and begin using the OnStage app to manage your Dual Work Period.

Note: Due to IND regulations, non-EU students are not eligible for the dual master's program. However, the professional master's in Business Analytics is open to non-EU applicants.

5 Application

If you meet all the admission requirements (see the Business Analytics master's program website) and wish to enroll in the dual master's program, please contact the <u>Dual Work Period</u> <u>coordinator</u>.

As a dual student, you must secure a suitable dual workplace yourself. While Vrije Universiteit Amsterdam collaborates with companies interested in hosting dual students, it is your responsibility to find and apply for a relevant position.

The host organization will assess your suitability as a potential employee through its standard recruitment process. If accepted, you will be placed on the company's payroll, receive a regular salary, and be subject to standard employment conditions such as a job description and performance evaluations.

Before you can begin working, formal approval from a Business Analytics staff member is also required (see Chapter 4). The university aims to ensure that your work experience aligns meaningfully with the academic content of the program.

6 The employment contract, insurance and abroad

Contract and insurance

As a dual student, you will sign a fixed-term employment contract with your host organization for 20 to 24 hours per week. You will be a regular employee, receive a salary, and be subject to standard employment conditions such as a job description and performance evaluations.

For any questions about your contract, please contact the HR department of your host organization.

Insurance

Depending on the nature of your work, certain types of insurance may be required. Responsibility for arranging this lies either with you or your employer—check with the HR department for guidance.

You are also required to have health insurance, which may be available through a collective policy offered by your employer. In addition, liability insurance is mandatory.

Useful links and further information can be found on the Canvas page.

Registering your stay abroad is mandatory

If you plan to go abroad for your dual work placement—even for just one day—you must register your stay online in advance. This is mandatory and helps the university support students in case of emergencies, such as during the COVID-19 pandemic.

Please refer to the <u>VU International travel policy for students - Vrije Universiteit Amsterdam</u> for details.

7 Coaching and supervision

7.1 Introduction

Throughout your studies at Vrije Universiteit Amsterdam, your academic progress will be supervised by university faculty, while your day-to-day activities at the dual workplace will be overseen by the host organization. The university remains closely involved, as the academic quality of your work is regularly assessed. Ongoing communication between you, the university, and the host organization is essential to the success of the dual study-work model.

7.2 Company supervisor

During your Dual Work Period, you will be supervised by a designated staff member at the host organization—your company supervisor. This person will guide your daily work activities and provide coaching, similar to the support given to regular employees.

7.3 VU supervisor

A faculty member from the Business Analytics program will serve as your VU supervisor (also referred to as your dual teacher). This supervisor must approve your dual workplace and will support you throughout the process. You will discuss the content of your interim and final reports with them, and they are required to attend your final presentation at Vrije Universiteit Amsterdam.

7.4 Dual coordinator

The dual coordinator of the Business Analytics program acts as the main point of contact at Vrije Universiteit Amsterdam. They maintain regular contact with both you and your company supervisor during the Dual Work Period. This contact focuses primarily on the progress and academic quality of your work, rather than on day-to-day practical matters.

7.5 Meeting April

Halfway through the Dual Work Period in April, a midterm meeting is held involving you, your company supervisor, your VU supervisor (dual teacher), and the dual coordinator. You are responsible for organizing and preparing this meeting, including the agenda, meeting notes, and a summary of agreements made.

The agenda typically includes:

- A brief introduction round
- Organizational aspects of the Dual Work Period (assessment, reporting, final presentation, and graduation project)
- A summary of your activities so far

- Feedback from your company supervisor
- Plans and projects for the remainder of the period

In consultation with your company supervisor, you may add additional items to the agenda.

A helpful structure for presenting your projects is to describe each one using the following five points:

- 1. Context. What was the project about?
- 2. Skills used. Which skills did you apply (from your studies and/or learned on the job)?
- 3. Knowledge gained. What new insights or knowledge did you acquire?
- 4. Duration. How long did the project take?
- 5. Your role. What was your specific contribution?

7.6 Interim report

You must submit a digital version of your interim report via OnStage no later than April 1. The report should be approximately 5 pages and include:

- A brief overview of all projects you have worked on
- A description of your own activities and contributions
- For each substantial project: a short explanation (¹/₂ to 1 page) of the analytics techniques used
- A preview of planned projects for the second half of the Dual Work Period
- An indication of whether one of the projects offers sufficient potential to serve as the basis for a mini-tutorial in your final report, demonstrating academic-level analytical depth (see Chapter 8 for final report requirements)

Before submitting, make sure your company supervisor has reviewed the report. You will receive feedback from your VU supervisor, which may help you adjust your focus or raise the level of your work in consultation with your company supervisor.

8 The final report and presentation

In addition to the interim report, you are required to submit a written final report and deliver a presentation at Vrije Universiteit Amsterdam at the end of your Dual Work Period. The report should describe your activities and demonstrate your understanding of the organization's structure and your role within it.

You must submit a digital version of your final report via OnStage within one month after completing your Dual Work Period. Please note that the contents of your report may be made publicly accessible unless you clearly indicate confidentiality on the title page.

8.1 Contents

Your final report should include the following:

- A description of the organizational structure of the company and the department where you worked
- An overview of the project(s) you participated in
- A summary of your activities and contributions
- A reflection on the connection between your work and the Business Analytics program

If you worked on multiple projects, briefly describe each one. Choose **one project** to explore in greater depth.

8.2 Sections and chapters

Your final report should include the following sections:

- Title page / Cover
- Preface
- Table of Contents

Part I. Business context

- Organization: Describe the host organization, including its mission, history, recent developments, and position within its sector (e.g., competitors, market share). Include an organizational chart.
- Department (if applicable): Outline the department where you worked, its responsibilities, and its place within the organization. Add a departmental chart if relevant.

Part II. Project and activities

• Project Overview: Briefly describe each project you worked on—its goals, rationale, outcomes (completed and pending), and timeline. Explain how responsibilities were

divided within the team and how the project fit into the department's broader objectives.

Your Role: Detail your specific contributions, responsibilities, and deliverables.
Describe the methods and analytics techniques you used, supported by a timeline of your involvement.

Part III. Mini-tutorial

- Mastery: Choose one project and explain the Business Analytics technique(s) you applied. Discuss:
 - What the technique is and why it was chosen
 - How it works and how it was implemented
 - What is involved to apply this technique in practice
 - Possible alternatives and why they were not used
 - Key decisions made and by whom (you, your team, supervisor, client, etc.)
- Academic Reflection: Link your work to the Business Analytics curriculum: Discuss:
 - Which courses were relevant?
 - Did you identify any knowledge gaps?
 - What new skills or insights did you gain?

Appendices

Include:

- References and literature
- Contact details of the organization and external supervisor(s)
- Organizational chart(s), if not already included in the main text

Note: This structure is a guideline. You may combine or expand sections as needed, but ensure that the depth and complexity of your work are clearly demonstrated.

8.3 Confidentiality

Your host organization may consider parts of your report to be confidential. It is your responsibility to ensure that confidentiality is respected at all times. Your report should still demonstrate your understanding of the organization, your projects, and your application of Business Analytics techniques—without disclosing sensitive or proprietary information.

If your report contains confidential content, clearly indicate this on the title page. In such cases, the report will be treated as confidential by all university staff involved.

To help safeguard confidentiality and ensure accuracy, both your interim report and final report must first be reviewed by your company supervisor before submission via OnStage. This allows the organization to verify that no confidential information is unintentionally

disclosed and gives you the opportunity to incorporate any feedback before formal assessment.

8.4 Use of Artificial Intelligence (AI)

The use of any AI applications, techniques, or tools is strictly prohibited with the exception of editing your own written text. Any other use of AI is not allowed and will be regarded and treated as fraud.

For full details on what is and is not allowed, please consult the <u>official guidelines on the VU</u> <u>website</u> regarding the use of AI in academic work. These guidelines explain the university's position on academic integrity and the responsible use of emerging technologies.

Students are expected to familiarize themselves with these rules. Ignorance of the policy will not be accepted as an excuse in the event of a violation.

8.5 Final presentation

In addition to the written report, you are required to give a presentation on campus about your Dual Work Period. The presentation should reflect the content of your report, with a particular focus on the mini-tutorial, where you demonstrate your mastery of a Business Analytics technique. Be mindful to respect the confidentiality of your host organization during your presentation.

- Duration: 20 minutes for the presentation, followed by 10 minutes for questions.
- Timing: Presentations are typically scheduled in December or January. If your Dual Work Period started on a different date (e.g., not September 1), please contact the dual coordinator to arrange an alternative presentation date.
- You will receive an email from the dual coordinator with presentation details approximately two months before the end of your work period.
- Your VU supervisor will attend your presentation.
- Whenever possible, presentations by multiple dual students are grouped together on the same day.
- Fellow students from the (dual) master's and bachelor's Business Analytics programs will be invited to attend.
- You are encouraged to invite your company supervisor as well. If they plan to attend, please inform both your VU supervisor and the dual coordinator in advance.

9 Assessment

Your performance during the *Dual Work Period* will be assessed by your VU supervisor, in consultation with your company supervisor. The final evaluation is based on several components:

- The quality and level of your work and how it was carried out
- Your final report
- Your presentation
- Two assessment forms completed by your company supervisor:
 - One by May 1 of the first academic year
 - o One at the end of the Dual Work Period

Please note that there is <u>no resit opportunity</u> for the course *Dual Work Period*. It is therefore essential to stay engaged, meet deadlines, and maintain regular communication with both your supervisors throughout the process.

10 Useful addresses

Master Coordinator / Academic Advisor Business Analytics: <u>Eduard Belitser</u> Room 9A-63 Telephone number: +31 20 598 7699

Business Analytics Dual Master Coordinator: Annemieke van Goor Room 9A-33 Telephone number: +31 20 598 7496