

## Graduate Placement and Recruitment Experience

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### ABSTRACT

Recruitment and selection is a key activity of HR Management. The main approach is to hire an individual who will be an asset to the team. This process becomes time consuming and costly, from job advertisement fees to training. In the selection phase the qualities we look to include are reliability, validity and usefulness. Organisations structure interviews to determine whether a candidate fits this profile but no system is perfect or without risk.

Amadeus Software have used a recruitment process over the past 25 years and believe we've defined a structure that helps companies choose the correct candidate for the job.

In training, graduates are given a structured curriculum which includes a blend of SAS® courses, examinations, open source technology study and certifications whilst being closely mentored and supported.

This rigorous schedule provides a foundation for graduates to start their careers whilst providing organisations the opportunity to recruit a qualified graduate.

### INTRODUCTION

The recruitment process can ultimately be a risk to any company. Whilst employers look for staff with relevant qualifications and experience, graduates apply for jobs to gain workplace experience. This can escalate into a difficult cycle for both the employer and graduate, where the employer may not be able to find a suitable candidate and the graduate will struggle to secure a role due to lack of workplace experience.

Our Graduate Programme reduces the risk and time required to find a suitable graduate for employers. We do this by recruiting, training and preparing the graduate for customers.

### PROGRAMME OVERVIEW

The Amadeus Graduate Programme has 5 main goals:



These goals are reached through Amadeus training courses, internal exams, self-study which includes SQL, R and Python training, case studies and a SAS Base Programmer exam. On completion the graduate will go on to work at a customer site and gain nine months of valuable work experience. These goals kick start the graduates career by a fast track training programme followed by relevant work experience. Upon completion of the programme, graduates will be able to use SAS software to efficiently interpret data for statistical analysis, produce data sets, provide statistical results to industry standards and have essential workplace experience. The ultimate goal of the Graduate Programme is the end result; for the graduate to become a full time, permanent employee with the customer.

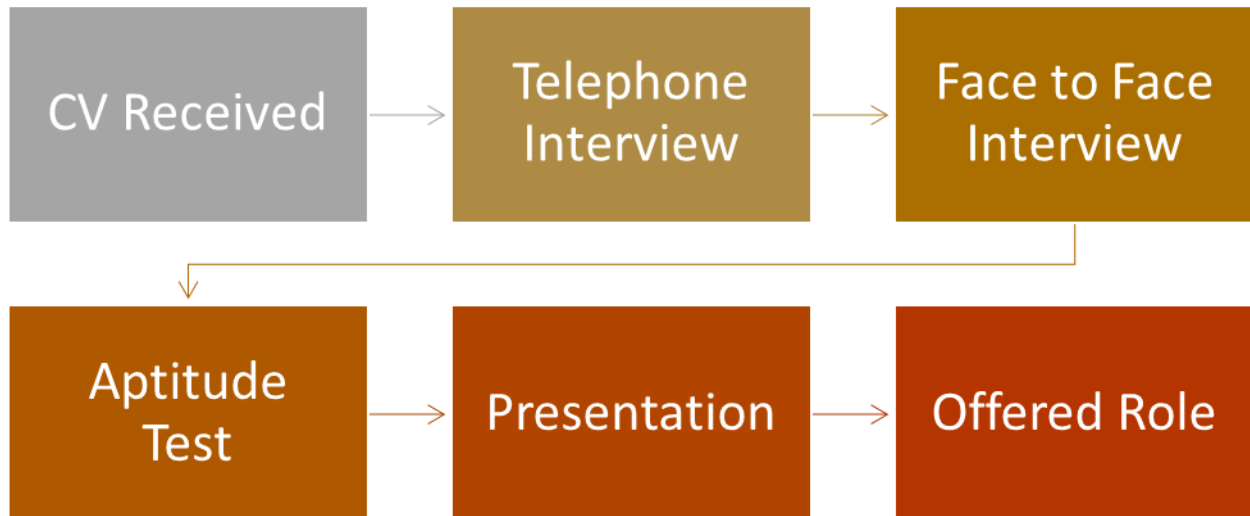
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### RECRUITMENT

The recruitment process can be a minefield. What platform to use? What budget will be used? Are we taking a risk with this candidate? What are the notice periods for the candidate?

Amadeus believes we have defined a process that takes all of the negative elements out of recruiting to help companies choose the correct candidate for the role and thereby reducing risk.

### RECRUITMENT PROCESS

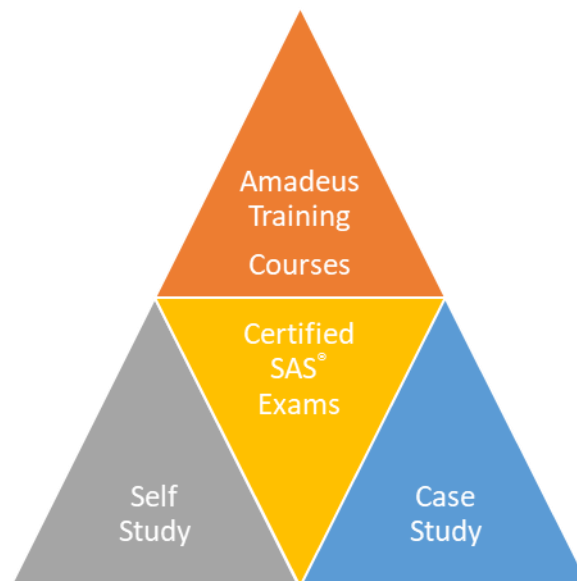


We do not take a graduate onboard lightly. They endure two interview stages, an aptitude test and they deliver a 10 minute presentation on a subject they are passionate about. This provides us with an insight into their logical mindset and their communication abilities before offering them a role.

All of the graduates that are offered roles have a minimum 2:1 Bachelors Degree in a Computer Science, Mathematics, Scientific or Languages subject.

### TRAINING PROCESS

During the three months of training, each graduate attends 15 Amadeus training courses, sits four internal Amadeus exams as well as the Base SAS Certification, and completes self-study on various topics u a case study. The training courses are spread out throughout the training period to ensure graduates have the best chance of learning the SAS language.



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### AMADEUS COURSES AND EXAMINATIONS

The Amadeus Courses include:

- SAS Fundamentals
- SAS Programming and Advanced SAS Programming
- SAS Macro and Advanced SAS Macro
- SAS Enterprise Guide
- Fundamental and Advanced SAS SQL
- Fundamental SAS Platform Administration
- Fundamental and Advanced ODS Graphics
- Fundamentals SAS Visual Analytics
- Fundamental Business Statistics for SAS
- Regression for Predictive Analytics
- Time to Event Data Analysis

The 4 internal exams are:

- Amadeus Fundamentals Exam
- Amadeus Programming Exam
- Amadeus Macro Exam
- Amadeus Fundamental SQL Exam

Passing these exams is paramount to both ourselves and the graduate as it shows us the graduate is learning at the correct pace and understanding the SAS language. For those who need extra support, we offer technical help from our team who spend time with the candidate running through areas they may misunderstand. The graduate has to pass each internal exam to move forward, they each get one resit on every exam but no more.

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### TRAINING SCHEDULE

#### SELF-STUDY

We offer the graduates a range of self-study during their training. The self-study we offer can also be tailored by the customer to accommodate their recruitment needs.

The style of self-study varies between online courses, videos, practical courses and reading. We've experimented with various arrangements and we have now found a balance to maintain interest in self-study.

#### NON SAS SELF-STUDY SUBJECTS

| <b>SQL</b>                                     | <b>Microsoft® Office 365</b>          |
|------------------------------------------------|---------------------------------------|
| Intro to SQL for Data Science                  | Word                                  |
| Joining Data in PostgreSQL                     | Excel                                 |
| <b>R</b>                                       | Outlook                               |
| Introduction to R                              | Sharepoint                            |
| Intermediate R                                 | Powerpoint                            |
| Importing Data with R                          | Access                                |
| Cleaning Data with R                           | <b>Office Protocols</b>               |
| <b>Python</b>                                  | Time Management                       |
| Intro to Python for Data Science               | How to be Involved in Office Meetings |
| Intermediate Python for Data Science           | Professionalism Presentation          |
| Python Data Science Toolbox                    | How to Send Emails Presentation       |
| Importing Data with Python                     |                                       |
| Cleaning Data with Python                      |                                       |
| Pandas Foundations                             |                                       |
| Manipulating Data Frames with Pandas           |                                       |
| Merging Data Frames with Pandas                |                                       |
| Introduction to Databases in Python            |                                       |
| Introduction to Data Visualisation with Python |                                       |
| Statistical Thinking in Python                 |                                       |

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### 3 MONTH TRAINING SCHEDULE

|         | Monday | Tuesday | Wednesday | Thursday | Friday |
|---------|--------|---------|-----------|----------|--------|
| Week 1  |        |         |           |          |        |
| Week 2  |        |         |           |          |        |
| Week 3  |        |         |           |          |        |
| Week 4  |        |         |           |          |        |
| Week 5  |        |         |           |          |        |
| Week 6  |        |         |           |          |        |
| Week 7  |        |         |           |          |        |
| Week 8  |        |         |           |          |        |
| Week 9  |        |         |           |          |        |
| Week 10 |        |         |           |          |        |
| Week 11 |        |         |           |          |        |
| Week 12 |        |         |           |          |        |
| Week 13 |        |         |           |          |        |
| Week 14 |        |         |           |          |        |

#### KEY:

|  |                  |  |                                         |
|--|------------------|--|-----------------------------------------|
|  | Amadeus Course   |  | Case Study                              |
|  | Internal Exam    |  | Self-Study: R, Python, Office Protocols |
|  | Examination Prep |  | Base SAS Exam                           |

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### CASE STUDY

Each graduate completes a case study during their training period. This case study is written by Amadeus Technical Staff and assessed by the Technical Team. It involves importing data from text and Excel files into SAS, combining the data sources and producing various reports and analyses. Whilst doing so they also need to demonstrate each step of their processes to show their SAS capabilities.

The case study gives graduates an opportunity to utilise their new found skills in an alternative environment. Graduates spend this time understanding how the SAS language is used for business. It allows the graduates to work in their own time, creating solutions for themselves and giving them a further insight into how they will be using SAS in their placement and into their careers. Once completed the case study is assessed by our Technical Team who spend time with the graduates talking through their procedures and thoughts and offering additional advice and support.

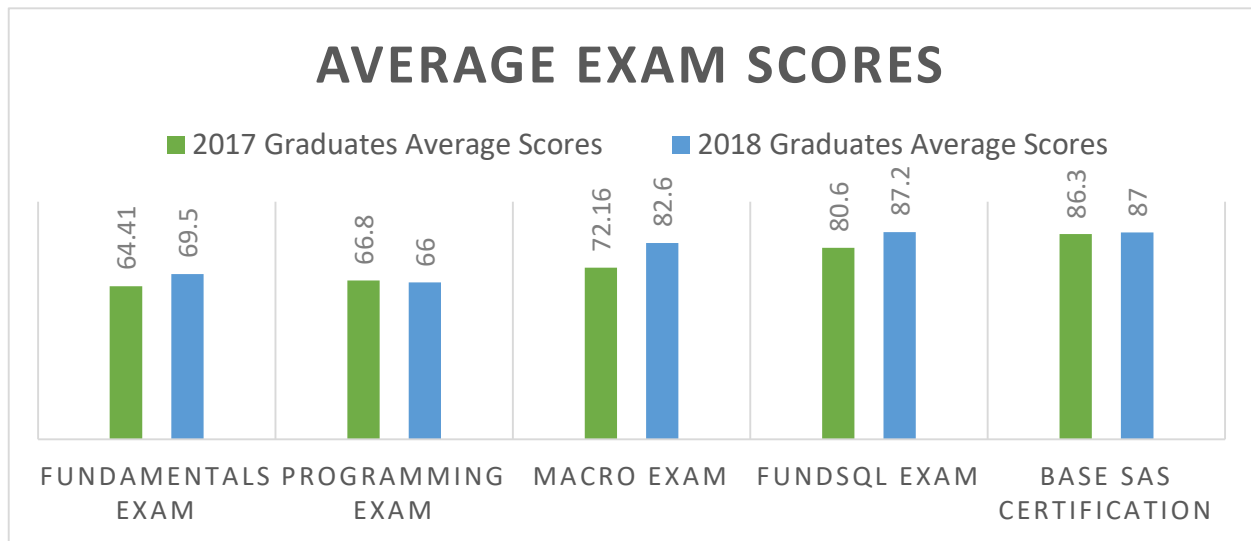
### CERTIFIED EXAM

Each graduate will successfully pass the SAS Certified Base Programmer exam before being placed on a customer site. This qualification gives Amadeus, the candidate and our client the confidence that they are ready to begin the placement.

### RESULTS

#### AVERAGE EXAM SCORES

As mentioned previously, graduates sit internal exams and the SAS Certified Base Programmer exam. The table below shows the average scores of our 2017 and 2018 graduates so far:



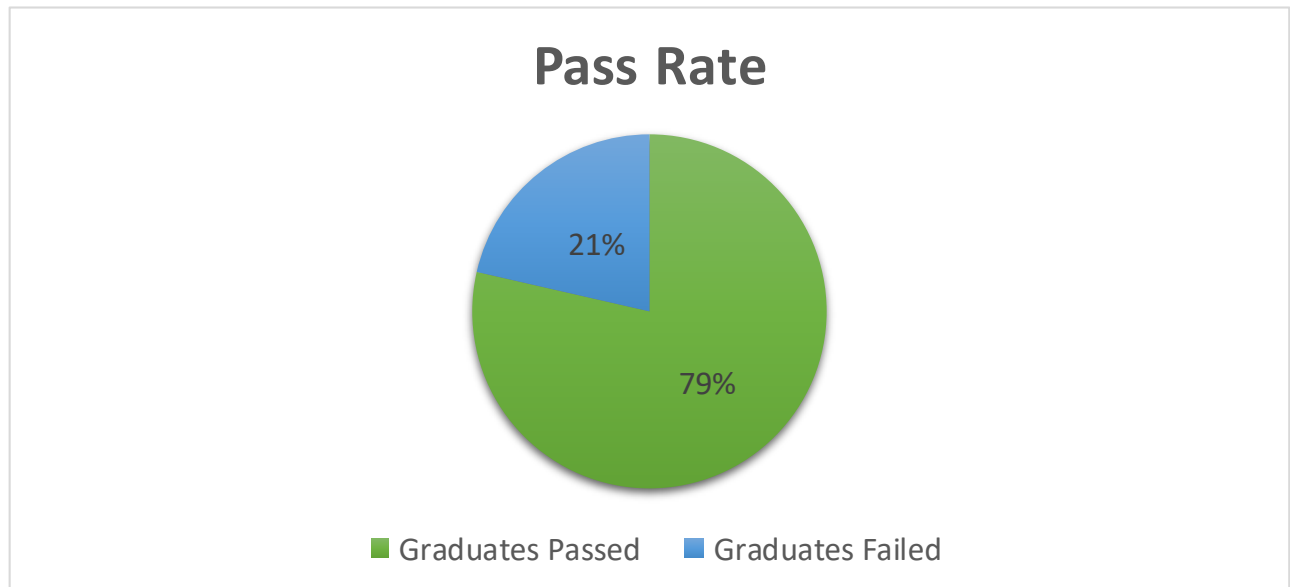
The pass rate for our internal exams is 60%. As the chart shows, the graduates scores increase every exam they sit. This proves to us that the more training they are receiving, the more they are learning and understanding the SAS language. We altered the training schedule in December 2017 so the training courses and exams were more structured through the training period and as a result of this, the 2018 graduates have marginally higher scores than 2017 graduates.

The average scores for the SAS Certified Base Programmer exam is notably impressive considering the graduates are learning SAS in a fast paced environment, with an average score of 86.3% for 2017 graduates and 87% for 2018 graduates.

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### GRADUATE PASS RATE

As the training period is extremely intense, some graduates may not get through the full 3 months of training. The pass rate is shown below:



The 79% who passed the training period are now in their customer placements, several of which have received contract extensions and permanent job offers due to their hard work and commitment to the programme.

### GRADUATE BENEFITS

Graduates receive a range of benefits for joining the Amadeus Graduate Scheme.

- They receive full pay from day 1 of training
- Pay increase on completion of training
- Up to 20 days holiday plus St George's Day
- Expenses are paid for:
  - Travel
  - Accommodation
  - Food Allowance
- Each graduate receives a laptop on their start date with necessary software included
- Technical and management support throughout their contract
- Their qualifications are fully funded by Amadeus

### CUSTOMER PLACEMENT



The customer receives a high quality graduate on a 9 month placement contract. This graduate is an Amadeus employee which relieves customers of administration work. If a customer requires a graduate to have a specific set of skills, Amadeus will train the graduate to suit the customer's role. Throughout the 9 months placement, the graduate becomes a part of the customer's team and integrates well into the business. We make sure both the customer and graduate are happy and fitting in well with regular monthly phone calls.

The placement gives the graduates time to practice the skills they have learnt in a business environment and allows them to work with the SAS language in a real-life setting. When the graduate is in their placement they have two managers, one at the customer site and one at Amadeus as they are still an Amadeus employee. This provides the graduate with all the help and support they need as they have the technical and management team at two different companies.

Once the graduate is on placement, they are still under an Amadeus contract but they comply to the customers' policies and procedures. They fit in as though they are staff and become a colleague in a short space of time.

#### CUSTOMER CASE STUDY

To give you an example, Amadeus has a longstanding support contract in place with a customer in Scotland, which centres on the management, analysis and reporting of data arising from international clinical trials. The associated programming requirement is highly technical, specialised and strictly governed in terms of protocols, operating procedures and local and global regulation. Over time, it became clear that the cyclical nature of our customer's work lent itself well to our latest business service – the Amadeus Graduate Placement Programme.

The process is a simple one, we provided our customer with the CVs of those Amadeus graduates available for placement. The customer then chose their preferred candidate and the three parties (Amadeus, the customer and the graduate) agreed a unique and potentially very rewarding collaboration. It is worth noting that the customer is located in a remote area of Scotland, providing a fantastic and exciting experience for any keen graduate. Facilities for outdoor recreation are very well developed, those for a busy social night life less so. We found accommodation a mere cycle ride from the workplace.

One of the conditions of the Amadeus Graduate Placement Programme is that the individual is treated as a normal company employee (apart from minor variations in remuneration and holiday). On arrival, the graduate completed induction training, before beginning work on one of the ongoing projects that was at a peak of activity.

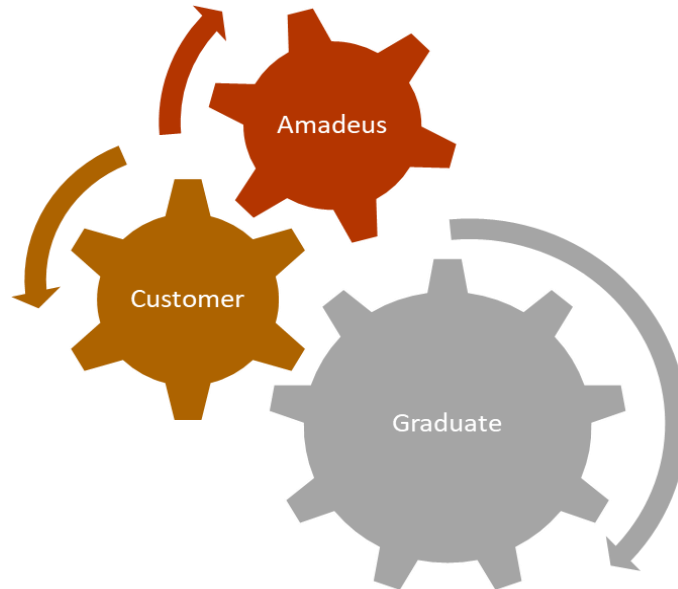
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From then on and for the next nine months, the placement proceeded exactly as for any other employee, including briefings, team meetings and any other company or departmental activity. The workplace is an informal, friendly environment, and the graduate integrated seamlessly, thanks to the concerted efforts of our customer and the graduate himself.

From Amadeus' point of view, the goal of our programme is to find a permanent, rewarding position for our graduate and to provide valuable skills for our customers. In this first programme with this particular customer, all parties were delighted when the graduate completed their placement and accepted a permanent role. Moreover, in a seamless transition, a new graduate placement commenced immediately after the first placement had completed.

### SUPPORT

Each graduate has full support from both Amadeus and the customer.



Amadeus have monthly phone calls with both the customer and the graduate for an update on how the graduate is settling in, if they are enjoying the role and we use this time to offer additional support for the graduate.

### ADDITIONAL TRAINING

We have a variety of customers who use our graduate programme so we provide additional learning and support for those going into specialised companies. Each client can suggest or request certain learning they would like the graduate to undertake and we accommodate this.

### RELOCATION

As customers are based all over the UK and Ireland we only hire graduates who are happy to relocate to any area. This gives our customers peace of mind over where the candidate will live.

### TESTIMONIALS

We have received great testimonials from our graduates on placement, here are a couple:

*"Accepting a graduate scheme, such as the one offered at Amadeus Software, was a no-brainer for me. The opportunity to learn to code in SAS is exciting enough but it's the real smoothness of the process that impressed me.*

*The teachers at Amadeus are intelligent and affable, capable of cutting through corporate guff while remaining professional and delivering smart teaching methods at a sensible pace. Classes are small and hardware is all prepared so there is little time wasted to administration. Any pastoral aspects are dealt with superbly; you will be well fed, rested and helped out with travel and all learning resources are accessible and comprehensive. Add to this the ability to work mostly from home, practice for the tests with plenty of revision days as well as complete some challenging case studies and you've got a real peach of a graduate scheme.*

*The opportunity to attend your placement is an exciting way to apply the skills you have learned and get to grips with some real problems. I found myself well guided and didn't struggle once in my new office.*

*As the spearhead of the new graduate scheme, I am pleased to report that the process has felt like an enormous*

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*success. With every graduate that has passed through Amadeus since, I am confident that the experience has been fine-tuned to provide value for yourself, Amadeus and any future employees who would be lucky to have you."*

*"In three months the Amadeus Graduate Scheme managed to do what four years of a Physics degree failed to – get me interested in, and teach me, coding. It was something I had tried, and failed, to do multiple times on my own.*

*The intensive course structure left me with no other option than to focus solely on SAS programming, and the level of teaching made sure what I was focusing on was logical and understandable. The small class sizes mean that, if you're struggling with something, somebody is there to help you personally.*

*Compared to other graduate schemes, the Amadeus one is far, far ahead. Graduates are respected and looked after; with travel, food and accommodation during the in-house courses covered to a sensible and flexible degree.*

*Being fresh out of university is a competitive and difficult environment, it's extremely hard to find a job. The graduate scheme solves this by giving you a foot in the door in a very employable field and a year's experience in an extremely desirable programming language."*

### CONCLUSION

The Amadeus Graduate Programme is a risk free recruitment process for companies. It allows clients to choose a graduate knowing they have been through a rigorous training schedule and have passed internal and external exams. It diminishes the time consuming recruitment process and it gives a customer peace of mind. Some customers will still use the interview process if there are a few graduates going through training together but this is to ensure they have the correct graduate for their business.

The training process is intense, thorough and extremely rewarding. Many of our graduates come to us with very little or no experience of SAS at all and are then able to go into placement as Base SAS Certified programmers. The graduates gain a huge sense of achievement from the 12 month contract and all look forward to their very bright futures.

### CONTACT INFORMATION

Your comments and questions are valued and encouraged.

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