

AAE Core Syllabus Coverage Report

REPORT ON AAE CORE SYLLABUS COVERAGE IN SPAIN.

Instituto de Actuarios Españoles



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Actuarios Españoles**
COLEGIO PROFESIONAL



Access to the profession of Actuary in Spain is gained through a specific University training route:

Master's Degree in Actuarial and Financial Sciences.

This is a 2-year master's degree (120 ECTS) which this academic year 2021/2022 is offered by the following universities:

UNIVERSIDAD COMPLUTENSE DE MADRID
UNIVERSIDAD DE LEÓN
UNIVERSIDAD DE BARCELONA
UNIVERSITAT DE VALÈNCIA
U. DEL PAÍS VASCO/EUSKAL HERRIKO UNIBERTSITATEA
UNIVERSIDAD DE MÁLAGA
UNIVERSIDAD CARLOS III
UNIVERSIDAD ALCALÁ DE HENARES
UNIVERSIDAD REY JUAN CARLOS

In order to become a member, the Instituto de Actuarios Españoles verifies that the skills, competencies and knowledge required to practise the profession are attained through the proposed syllabus. Then, both prior to the implementation of the program (considering the proposal from the University) and subsequently, once the syllabus has been implemented, compliance with AAE Syllabus is reviewed by the Instituto de Actuarios Españoles (IAE).

This accreditation of every University degree is not for life but must be renewed periodically, checking compliance to the AAE Syllabus and also considering new developments in the actuarial, economic, financial, social and legal fields that affect actuaries.

In addition to the nine learning areas of the AAE Core Syllabus, and due to the professional activity reserve that actuaries have in Spain, information has been requested from the 9 universities mentioned above on aspects that actuaries in their specific professional work in Spain should be aware of in order to carry out their work in the insurance, solvency, social security, legal and business framework:

- Life
- Pensions
- General insurance
- Enterprise Risk Management
- Investments
- Health care
- Accounting
- Banking
- Social security
- Reinsurance
- Solvency II
- Traffic accidents
- Interest rate derivatives



PARTICIPATION

The IAE's Universities Committee developed an evaluation matrix based on the AAE Syllabus. This matrix allows the analysis of each of the sub-items of the Syllabus at subject level, so that the matrix itself subsequently agglutinates and gives the overall view of the degree in terms of the coverage.

This tool, in turn, also allows the analysis of the internal situation of the training process, detecting duplications and gaps in areas so that the overall scope of actuarial knowledge within every training plan can be optimised.

All the universities in which the Master's Degree in Actuarial and Financial Sciences is offered have participated.

The scope of the training effort of the syllabuses of the Universities has been compiled in detail and brought together in a single file so that those areas in which there may be gaps in knowledge can be appreciated.

All this work has been carried out within the IAE's Universities Commission, coordinated by PhD J. Iñaki De La Peña.

RESULTS

In general terms, it can be said that a very satisfactory level is reached in all Spanish universities. Logically, there are some gaps, all of which can be filled either through the lectures offered by the universities themselves or through courses offered by the IAE. It should also be noted that there may be sections which, although they are not specifically covered in the Master's courses, students already have previous knowledge of the subject due to their Bachelor's degrees.

Following it is a summary by university:

UNIVERSIDAD COMPLUTENSE DE MADRID

C1 - Statistics. Practically all items are fulfilled.

C2 - Economics. All items are fully met.

C3 - Finance: All items are fully met.

C4 - Financial Systems: All items are fully met.

C5 - Assets: All items are fully met.

C6 - Data and Systems: Compliant, but needs to be complemented with Data analysis.

C7 - Actuarial Models: Well met.

C8 - Actuarial Risk Management: Compliant, but needs to be complemented with risk mitigation measures.

C9 - Personal and Actuarial Professional Practice: All items are fully met.

Advanced Skills:

They are adequately complied with.



UNIVERSIDAD DE LEÓN

C1 - Statistics. Practically all the items are fulfilled, although they indicate that they do not cover Bayesian statistics, which will depend on the degree taken by the student.

C2 - Economics: All items are fully met.

C3 - Finance: The items are fulfilled except for the area of sustainable finance.

C4 - Financial Systems: All items are fully met.

C5 - Assets: Fulfil the items with a gap in budgetary risk.

C6 - Data and Systems: Although it complies with the item, it needs to go deeper into statistical learning and data analysis.

C7 - Actuarial Models: Compliant, although severity models and some actuarial applications need to be strengthened.

C8 - Actuarial Risk Management: Compliant, although risk measurement and modelling needs to be further developed.

C9 - Personal and Actuarial Professional Practice: Although compliant, to be completed with decision making.

Advanced Skills:

Health Insurance and traffic accidents should be included.

UNIVERSITAT DE BARCELONA

The University of Barcelona's training programme is new for the academic year 2022/2023. The design has been analysed and they indicate that they comply with the complete core syllabus. However, they do not indicate anything about the advanced skills specific to training for the actuary's reserve activity in Spain.

Advanced Skills:

The program should include health insurance.

UNIVERSITAT DE VALÈNCIA

C1 - Statistics. All items are fully met.

C2 - Economics: All items are fully met.

C3 - Finance: All items are fully met.

C4 - Financial Systems: All items are fully met.

C5 - Assets: All items are fully met.

C6 - Data and Systems: Fulfils the items with some governance missing.

C7 - Actuarial Models: Well met.

C8 - Actuarial Risk Management. These are comfortably met.

C9 - Personal and Actuarial Professional Practice. All items are fully met.

Advanced Skills:

The program should include traffic accidents.

U. DEL PAÍS VASCO/EUSKAL HERRIKO UNIBERTSITATEA

C1 - Statistics. Practically compliant on all items, with minor gaps.

C2 - Economics: All items are fully met.

C3 - Finance: All items are fully met.

C4 - Financial Systems: All items are fully met.

C5 - Assets: All items are fully met.

C6 - Data and Systems: Complies with the items and should be complemented with machine learning.

C7 - Actuarial Models: All items are fully met.



C8 - Actuarial Risk Management. Complied with, although risk measurement and modelling needs to be completed.

C9 - Personal and Actuarial Professional Practice. These are fulfilled. To be completed with organisational issues in decision theory.

Advanced Skills:

They are adequately complied with.

UNIVERSIDAD DE MÁLAGA

C1 - Statistics. Practically compliant on all items, with minor gaps.

C2 - Economics: All items are fully met.

C3 - Finance: All items are fully met.

C4 - Financial Systems: All items are fully met.

C5 - Assets: All items are fully met.

C6 - Data and Systems: Fulfils the items with some governance missing.

C7 - Actuarial Models: Well met.

C8 - Actuarial Risk Management: Comfortably complied with.

C9 - Personal and Actuarial Professional Practice. All items are fully met.

Advanced Skills:

They are adequately complied with.

UNIVERSIDAD REY JUAN CARLOS

C1 - Statistics. All items are fully met.

C2 - Economics. All items are fully met.

C3 - Finance. All items are fully complied with.

C4 - Financial Systems. All items are fully complied with.

C5 - Assets. Sufficiently fulfilled, although it would be desirable to complete with model limitations and benchmarking.

C6 - Data and Systems. This is a well-developing criterion in which professional issues and reporting and results communication tools should be incorporated.

C7 - Actuarial Models. Complied with, although the principles of actuarial modelling should be coordinated for optimal development.

C8 - Actuarial Risk Management. Partially met. Should focus on developing "Risk measurement and modelling & Risk mitigation and management".

C9 - Personal and Actuarial Professional Practice. Although compliant, professionalism in practice needs to be addressed.

Advanced Skills:

They are adequately complied with, although they should be supplemented by traffic accidents.

UNIVERSIDAD ALCALÁ DE HENARES

C1 - Statistics. Adequately fulfilled, although Graduation and statistical tests should be incorporated in the training.

C2 - Economics. Adequately met,

C3 - Finance: All items are fully met.

C4 - Financial Systems: Well met.

C5 - Assets: All items are fully met.

C6 - Data and Systems: The item is fulfilled, although Statistical learning should be incorporated.



C7 - Actuarial Models: Adequately met

C8 - Actuarial Risk Management. It is contemplated and complied with, although it should incorporate more depth in the identification, measurement and modelling of risks, as well as in monitoring and communication.

C9 - Personal and Actuarial Professional Practice. In general terms, this is a section that needs to be further developed and integrated into the training programme.

Advanced Skills:

They are adequately complied with, although they should be supplemented by traffic accidents.

UNIVERSIDAD CARLOS III

C1 - Statistics. All items are met except for one sub-item.

C2 - Economics. All items are met except for one sub-item.

C3 - Finance. All items are fulfilled.

C4 - Financial Systems. All items are met except for one sub-item.

C5 - Assets. All items are fully met.

C6 - Data and Systems. All items are fully met.

C7 - Actuarial Models. All items are met.

C8 - Actuarial Risk Management. All items are fully met.

C9 - Personal and Actuarial Professional Practice. Although quite a lot of items are covered, it is a criterion where effective communication and Problem solving and decision making have to be completed mainly.

Advanced Skills:

Adequately fulfilled, although it should be completed with health insurance.