



Institute of  
Analytics

The Global Body for Analytics

# Accreditation Criteria

IoA Accredited | Data Science & Analytics  
Endorsed Courses

[www.ioaglobal.org](http://www.ioaglobal.org)

## INTRODUCTION

The rapid development of the field of Data Science & Analytics and the demand for these skills in the jobs market have created a need for recognition of professional training.

The Institute of Analytics (IoA) considers it appropriate to develop core training requirements for those seeking employment in the Data Science & Analytics field. Programmes which meet those requirements will be eligible to apply for recognized accreditation status with the IoA. Satisfactory completion of an IoA Endorsed Course automatically meets the educational requirements for fast-track progression through IoA Affiliate membership, to IoA Associate membership, a status of recognition as a professional data analyst (other conditions apply).

The criteria are intended to respect the independence and diversity of the field of Data Science & Analytics, while ensuring that employers can assume certain quality standards among students graduating from an accredited course of study. It is hoped that the opportunity to acquire IoA Endorsed Course status will encourage staff and course providers to monitor, develop and enhance their performance in ways that lead to a global body of quality training.

Accreditation can be awarded for a 3-year period, subject to brief annual renewal, to those courses which make an application and meet the minimum requirements, conforming to the criteria outlined below.

The IoA acknowledges that Data Science & Analytics is a fast-moving field. At annual renewal, the course providers will be required to submit a brief report and inform the IoA of any substantial<sup>1</sup> changes to the course content for the following year.

IoA Endorsed Course Accreditation is for specific courses rather than course providers. If an institution runs two or more relevant courses but with different content, an application for accreditation needs to be made for each course.

Courses which have completed the accreditation process and have received confirmation of their accredited status may include the words 'IoA Endorsed Course' and the IoA Endorsed Course logo on their publicity material for that specific accredited course only after accreditation has been awarded and while accreditation is current.

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<sup>1</sup> A substantial change would be any change where an entire course requirement is removed from the accredited course.

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## PART 1 - REQUIREMENTS FOR IOA ENDORSED COURSE STATUS

1.1 All students currently enrolled on IoA accredited courses are welcome to be Student Members of the IoA.

1.2 Applications for accreditation for the IoA Endorsed Course track will be welcomed from training courses that require a minimum ISCED Level 3 Certificate (e.g., high school diploma) or local equivalent on entry to the course. The course should require not less than 15 hours' student contact time for the specified course content, with a substantial requirement for independent study.

1.3 An Endorsed Course must provide an appropriate mix of theoretical training in the field of Data Science & Analytics, and practical experience of applying data solutions.

1.4 On application, any information, course specifications, leaflets, brochures, advertisements, etc. supplied to the public must be made available to the IoA.

1.5 The course should be subject to course moderation processes. Moderators must be appropriately qualified and have experience assessing comparable courses.

1.6 There must be a clear written complaints procedure available to students, staff, and other training supporters. The course provider has ultimate responsibility for complaints and must have a clear written procedure for dealing with complaints.

1.7 Courses are subject to the IoA's Code of Ethics and Practice.

### 2. Admission Process

2.1 There are no minimum or maximum student numbers required at intake.

2.2 Prospective students should be provided with detailed and accurate information about the course, including its structure, aims, staffing, content, assessment requirements, fees, and conditions of participation, (e.g., time commitment or equipment requirements).

2.3 The procedure for selection should be clearly explained and be consistent with the course rationale, design, and methodology.

### 3. Staff

Course providers are accountable for the work of all staff.

3.1 Course staff shall monitor all trainers and supervisors.

3.2 Core Staff members are members of staff who have ultimate responsibility for the course and for the experience, well-being and advancement of students. Core Staff members are also directly involved in admission, course management, assessment and content oversight.

3.3 There must be at least two staff team members nominated as Core Staff for each iteration of the course (e.g., one cohort of an Introduction to Python course).

3.4 Core Staff may apply for membership of the IoA at the level appropriate to their qualifications and experience.

3.5 Core Staff must be familiar with and agree to work within the current version of the IoA's Code of Ethics and Practice. Copies of the Code of Ethics and Practice are available from IoA.

### 4. Course Rationale and Design

4.1 Courses should provide a clear statement of the rationale and design, including methods and practical exercises, which is consistent with the actual structure of the course and reflects the Core Accreditation Requirements listed in this document.

4.2 All courses should provide detailed study of one of the Core Skills listed in Section 5.

4.3 There should be a balance between theory and practice and between all elements of the course.

## PART 2 - COURSE CONTENT

The IoA acknowledges that Data Science & Analytics is a field defined by multiple areas of interest and dynamic change. All accredited IoA Endorsed Courses must cover at least one of the 4 Core Skills listed below.

### 5. The Four Core Skills

The IoA recognizes that the balance of focus for skills on independent courses will vary. For a course to qualify, it must have at least ONE of the following skills as the focus of study. Courses that cover more than one skill will also be recognized provided that the balance of those skills is the focus of the course.

#### 5.1 Core Skill 1      *Data collection and database maintenance*

Database schema design and use

Data collection and provenance

Basic initial exploratory data analysis

Data sampling theory and application

#### 5.2 Core Skill 2      *Data cleaning*

Theory of data cleaning, validation, data integrity (accuracy, consistency etc.) and ongoing quality assurance

Theory and practice of handling missing and duplicate data

Theory and practice of normalization or the removal of outliers

#### 5.3 Core Skill 3      *Data modelling*

Theory and practice of a range of models on large data sets

#### 5.4 Core Skill 4      *Data Visualization*

Theory of data visualization and avoiding visual deception

Practice of data visualization design for a non-technical audience

5.5 It is not anticipated that the Core Skills for IoA accreditation will change in the short term. However, given the rapid development of new technologies relevant to the field, and the large number of research technologies currently close to maturity, the IoA reserves the right to update the Core Skills as needed in response to emerging technologies and legislative environments. An 18-month period of notification and support will be given to all accredited suppliers in the unlikely event of a change, to allow course providers to adjust to the new requirements. Support can be agreed with the IoA on a case-by-case basis.

## 6. Coding and software requirements

The IoA is language and software agnostic and will accept any relevant software or programming tool for Data Science & Analytics, but course providers are required to submit details of the software and languages used for practical work during the application process.

## 7. Methods

Course staff are required to take responsibility for providing a range of learning experiences congruent with the topic of instruction. The course should include:

- (i) Theoretical instruction
- (ii) Practical application of technologies



## PART 3 - THE ACCREDITATION PROCESS

Before applying for accreditation, course providers should familiarize themselves with the course accreditation procedures above.

### 8. Application

A course provider wishing to apply for IoA Endorsed Course Status should supply the following in the first instance:

- (i) A completed application form.
- (ii) Copies of any explanatory or promotional material such as course specification documentation to be used with the course to be accredited.
- (iii) Confirmation that the terms and conditions of accreditation have been read and agreed by the applying body.

### 9. Accreditation

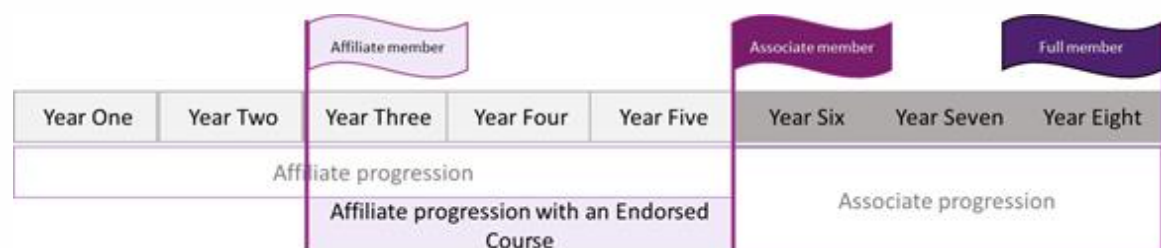
The information submitted will be considered by the IoA. If the application meets initial requirements, a representative of the IoA will submit a formal recommendation report.

The IoA reserves the right, as deemed necessary, to refuse accreditation or require amendments to the course for accreditation to be approved. In such circumstances, we will communicate this to the course provider at the earliest opportunity and agree the terms for re-submission should the course providers wish to do so.

Once a formal decision is taken, confirmation will be sent to the course provider.

Course accreditation by the IoA will last for three years, subject to annual ongoing monitoring by IoA, after which courses must reapply for accreditation.

Students currently studying on an IoA Endorsed Course automatically qualify for Student membership to the IoA. On successful completion of an IoA Endorsed Course, they can apply for Affiliate membership and upgrade to Associate membership after three years of relevant work experience, compared with five years for Affiliate members who have not undertaken an IoA Endorsed course.





Please see the IoA Analyst Competency Framework for full details of the key competencies we expect members to acquire during their progression through the membership levels and for the criteria for relevant work experience.

To qualify for fast-track Affiliate membership, students of a course must have attended and successfully completed their IoA Endorsed Course during a specified period of accreditation. In the instance that a course is awarded accreditation halfway through a student's pre-existing studies, they will be deemed to have completed an accredited course provided no amendments have been made to the course content since the start of the period of study. For information about accreditation withdrawal, please see Section 13.

We expect course providers to encourage their students to take up membership and enjoy the many benefits that membership of a professional overseeing body brings. The IoA can support course providers in promoting membership.

## 10. Use of the IoA Logo

Courses which have completed the accreditation process and have received confirmation of their accredited status may include the words 'IoA Endorsed Course' on their publicity material and may display the IoA Endorsed Course logo for that specific accredited course only after accreditation has been awarded and while accreditation is current. In the case of the intention to apply for IoA accredited status, a lapse of accreditation, or former existence of IoA accredited status, statements relating to accredited status may not appear in any publicity material around the course. Course accreditation status is non-transferable.

## 11. Accreditation not awarded

In the case of accreditation not being awarded, a final report and letter will be sent to the course provider notifying of this outcome.

The IoA reserves the right not to award accreditation in relation to a course where there exist circumstances which lead the IoA to believe that the course content or delivery are incompatible with the standards and ethos promoted by the IoA. This is a discretionary right of the IoA.

## 12. Monitoring of the course after accreditation

The IoA will continue to monitor the course after accreditation. To support this, it is essential that course leaders appoint two Core Staff members and if necessary one additional administrator to liaise with the IoA.

The role of the liaison person will be to submit yearly reports informing the IoA about the continuance of, and any changes to, the course. This report falls due one year after accreditation is awarded.

### 13. Sanctions and withdrawal of accreditation

Failure to meet the criteria will result in the suspension or complete withdrawal of IoA accreditation. Accreditation of a course may be completely withdrawn or suspended by the IoA at any time if:

- (i) Course criteria are not met
- (ii) Standards are not maintained

Any misleading or inaccurate information that is given to the IoA will result in a course being withdrawn from the course accreditation process.

In the event that accreditation is withdrawn from a course halfway through studies, existing student members on the course will be contacted by the IoA, and we will endeavor to find a mutually satisfactory resolution.

In addition, the IoA reserves the right to consider any unusual behaviour by those providing the course or any of its employers or agents, as a breach of the standard expected by the IoA.

In the event that the Endorsed Course owner has an Approved Learning Partnership agreement with another learning provider, it will be the responsibility of the course owner, not the IoA, to discuss the withdrawal of accreditation.

## PART 4 - RENEWAL OF COURSE ACCREDITATION

14.1 An IoA Endorsed Course may seek re-accreditation by providing written evidence the course continues to meet the current minimum standards for accreditation. The written submission should include the following:

- (i) A completed renewal form and application must be submitted to the IoA at least 3 months before the date of expiry of current 3-year accreditation, which will include any changes to the course content, direction, duration and format.
- (ii) Particulars of any changes in relation to the core trainers and core staff, including qualifications of any new core staff.
- (iii) Copies of any explanatory or promotional material used, e.g. course leaflet, student course outlines, brochures, etc.
- (iv) The name of the person who will liaise with the IoA.
- (v) Agreement to the terms and conditions of accreditation by the renewing body if applicable.

14.2 Applications for Renewal of Accreditation will be considered by the IoA. Further information can be sought at any time.

14.3 The renewal of accreditation is valid for 3 years.



**Institute of  
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**The Global Body for Analytics**

**The Future is Here.**

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