ACCREDITATION DOCUMENTATION REQUIREMENTS

PREPARING FOR ACCREDITATION – INSTRUCTIONS AND TEMPLATES FOR PROVIDERS

October 2020 (version 3)

engineering new zealand
te ao rangahau

DOCUMENTATION AND VERSION CONTROL

Version	Action	Approver	Date
2.1	Part C – Initial Evaluation Submissions added to document	Standards and Accreditation Board	February 2015
2.2	• Minor changes to terminology • Updated references to accreditation criteria numbering	Standards and Accreditation Board	May 2016
3.0	Substantive revision to introduce a more prescriptive and succinct format for accreditation documents	Standards and Accreditation Board	October 2020

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PART A: PRINCIPLES AND GENERAL ADVICE

PURPOSE

This document is intended to provide Tertiary Education Organisations (TEOs) clarity on documentation requirements when preparing its accreditation document so there is a level of consistency that will support accreditation teams when evaluating applications.

PREAMBLE TO THE CURRENT VERSION

Earlier versions of this document provided guidance on the information TEOs should include in an accreditation document but left it primarily to the TEO to decide how to present that information. Although this approach gave the TEO flexibility, it often caused difficulties when the format used did not meet the accreditation team's expectations. This difficulty was particularly acute when mapping curriculum and assessment to Graduate Attributes – a fundamental component of the accreditation documentation. A second concern was the volume of accreditation material perceived to be required for a successful accreditation. The volume of accreditation documentation had expanded significantly over the years, making it onerous both on those preparing the documentation and on those having to digest it.

Version 3 reflects a shift to a more defined, templated approach. The two guiding principles are:

- The report format should be as prescriptive as possible to ensure a common understanding of the reporting requirements by the TEO, by the accreditation team, and by Engineering New Zealand
- The material should be concise.

SUBMISSION OF DOCUMENTATION

The application is required to be based around the following two reports, which should be supplied using the template provided in this document:

1. **TEO Overview Report** – covering the general information regarding the TEO seeking accreditation
2. **Programme Accreditation Report** – addressing programme-specific accreditation criteria, with one report per programme.

Note: A single report, clearly delineating these sections, can be submitted for a small TEO and/or single programme

INFORMATION TO BE AVAILABLE FOR INSPECTION DURING VISIT

During the accreditation visit, the accreditation team must have access to a dossier of material for all core engineering papers at each year, all final year papers, and any papers central to developing engineering design and professional practice skills. The information provided must include:

For all courses:

- The course descriptor and copies of key assessment tasks (e. g. tests, examination papers, assignments, project specifications) and associated assessment rubric

Additionally, for final year courses and any other assessments central to demonstrating competence against graduate attributes (claims made in Tables 1 and 2):

- graded examples of assessed student work (tests scripts, examinations scripts, assignments, project reports and final year research and/or design projects). The accreditation team must see examples that had been graded at the pass/fail boundary. Particular attention should be given to highlighting assessment activities that provide evidence of engineering design and professional practice competencies
- copies of Industry Advisory Group Terms of Reference and recent meeting minutes.

PART B: SUBMISSION INSTRUCTIONS AND TEMPLATES

TEO OVERVIEW REPORT – TEMPLATE

SECTION 1: TEO OVERVIEW [2 PAGES]

This section provides a brief description of the TEO. The purpose of this section is to assure the accreditation team that the TEO has a history of delivering high quality engineering education and will continue to do so, or alternatively the TEO is committed to engineering education in the future and has a plan to realise this commitment. The following should be included:

1. A brief outline of the organisational structure, both in terms of academic units (departments/schools/faculties/colleges etc) and institutional and departmental management. This should include the names of key role holders
2. A description of how engineering links with the long-term strategic plan of the institution and how engineering education relates to other academic activities within the institution.

SECTION 2: ENGINEERING OVERVIEW [2 PAGES]

Engineering New Zealand recognises that TEOs may organise themselves in a range of ways to deliver their engineering education programmes. For example, some TEOs may choose to operate a unified School structure, while others may be arranged into discipline-specific Departments. This section provides a more detailed description of the academic units delivering the engineering programme(s). It must include the following:

1. Description of the academic units – their approximate size in terms of staff and students, the names of the heads of the units
3. The programmes that are currently accredited and those that are being accredited as part of the current process
4. Other programmes (undergraduate and post-graduate) for which the academic unit has principal responsibility and the qualifications it awards.

SECTION 3: COMMON PROVISION [4 PAGES]

Some TEOs may have academic units that oversee teaching and/or resource elements common to more than one engineering programme rather than within the unit responsible for the specific engineering programme. Examples include management and assessment of work experience, workshop practice, first aid, etc. This section enables these common elements to be described and their relationship with the various programmes explained. If covered in this section, these elements do not need to be repeated in the individual programme reports and a simple reference to this section can be made.

PROGRAMME ACCREDITATION REPORT – TEMPLATE

SECTION 1: PROGRAMME

Section 1 focusses on the programme, its purpose and history, its design and structure, how it maps onto the appropriate Accord and delivers the attributes of that Accord, and the assessment philosophy adopted.

1.1 Programme Overview [2 pages]

This section should provide an overview of the programme being accredited. It would at least include:

- the discipline area
- its importance to New Zealand industry
- its history
- its place within the institution's other offerings
- its size in terms of EFTS and FTE directly associated with the programme
- a high-level statement regarding programme objectives or graduate outcomes.

1.2 Programme Structure [2 pages]

This section would typically have a clear diagram showing the course structure for the programme together with a commentary that could cover:

- rationale for elements of the structure
- changes to the structure since last accreditation (if appropriate)
- elements in common with other programmes.

1.3 Body of Knowledge and Learning Outcomes [2 pages]

This section is critical – it breaks the programme into a set of learning outcomes that define the body of knowledge covered by the programme. This body of knowledge is the defining characteristic of the programme and it will play a key role in the Accreditation Team's deliberations. In addition, the aim of this section is to map the learning outcomes onto the attributes of the appropriate Accord.

The challenge is to provide the necessary information as concisely as possible while still providing the accreditation team with enough detail. TEOS are asked to present this information in the specified format (Tables 1 and 2, Appendix). A commentary of maximum two pages can provide context and detail to supplement the table.

1.4 Assessment [2 pages]

The TEO is expected to provide an overview of its assessment practices so the accreditation team has evidence that assessments are robust and authentic. It would be expected that the assessment philosophy/approach adopted for certain key accord attributes might be a focus of this section. For instance, the assessment of ethics, capstone design including safety in design, and communication might be examples that require a more fulsome coverage. Other professional practice skills such as teamwork, which require a somewhat different approach to assessment, might be discussed. The adoption of mastery-based assessment might be another topic worth exploring.

Note: the TEO may choose to address this criterion (or parts of it) centrally as part of the Overview Report.

SECTION 2: RESOURCES

This section focusses on resources. It aims to reassure Engineering New Zealand that there are adequate human and physical resources to support the programme.

2.1 Staffing [2 pages]

Staffing (numbers and FTE) involved in delivering the programme should be concisely summarised in two tables of the specified format, one for academic/ teaching staff and one for technical/support staff (Tables 3 and 4, Appendix). A limited commentary can be included.

2.2 Facilities [2 pages]

A summary (Table 5, Appendix) of facilities and key physical and digital resources available to support the programme. A limited commentary can be included.

2.3 Financial Support [1 page]

A brief commentary on the financial support for the programme. This should include capital expenditure, funding for supporting teaching assistants, invited speakers, etc. A recent budget summarising revenue and costs might be helpful.

SECTION 3: QUALITY ASSURANCE

This section provides evidence to Engineering New Zealand that the programme has robust feedback mechanisms to ensure the programme is current and of a suitable standard. Issues of health and safety, support for students, programme success rates, etc should be included.

3.1 REVIEW PROCESSES [3 PAGES]

Robust academic programmes are founded on strong feedback/review mechanisms from a range of sources, which enable the TEO to evolve and improve the programme on a continuing basis. This section provides details of the various feedback/review processes and supplies evidence of their effectiveness.

It would be expected that this section would cover, at a minimum:

- feedback from students;
- internal review processes;
- benchmarking against similar programmes at other institutions;
- input from industry advisory boards and other external sources.

3.2 EXTERNAL ENGAGEMENT [2 PAGES]

This section focusses on external engagement, particularly associated with industry or the profession. Typically, the TEO will have a formal engagement mechanism such as an industry advisory board. The operation, composition and effectiveness of this board should be described. A table listing the various individual contributions staff members make towards industry engagement should be included (Table 6, Appendix).

3.3 STUDENT SUPPORT [2 PAGES]

This section details the various ways the TEO supports students during their studies. These could include academic support for those lacking particular skills, pastoral care and mentoring, career advice, support for those with disabilities, etc. The support provided for minority groups such as Maori and Pasifika, is likely to be a focus.

Note: the TEO may choose to address this criterion (or parts of it) centrally as part of the Overview Report.

3.4 HEALTH AND SAFETY [2 PAGES]

This section describes the health and safety culture within the department/programme including specific aspects of health and safety management such as reporting mechanisms.

3.5 PROGRAMME PERFORMANCE [2 PAGES]

This section provides a range of statistics for the programme. These should typically be presented in tables that include, at a minimum:

- enrolment and completion numbers since the start of the programme or the last accreditation – whichever is most recent;
- student cohorts by gender and ethnicity (Maori, Pasifika, international) since the start of the programme or the last accreditation – whichever is most recent.

SECTION 4: TOPICAL ISSUES [2 PAGES]

From time to time, Engineering New Zealand may identify key issues it would like current accreditation teams to pay attention to. The TEO uses this final section to provide a detailed commentary on these topical issues, which will be communicated to the TEO well ahead of the accreditation process. Examples might be:

- teaching sustainability
- academic cheating such as through ghost writers
- capstone design projects
- response to Covid-19 and impacts on teaching and assessment practices.

APPENDIX: REPORTING TABLES

The TEO is asked to use these tables when reporting information referred to in the text:

Table 1: Engineering Body of Knowledge

Table 2: Accord Attributes

Table 3: Academic Staff

Table 4: Support Staff

Table 5: Facilities and Equipment

Table 6: External Engagement

TABLE 1: ENGINEERING BODY OF KNOWLEDGE (WA/SA/DA01 LEARNING OUTCOME SUMMARY)

This table summarises the fundamental and specialist engineering knowledge included in the programme and linking to Accord Attribute 01. The learning outcomes should be aggregated in subject areas or sub-disciplines and at a level where there are no more than five learning outcomes defined for any one 15 credit course.

Subject area	#	Description	Course(s)	Credits	Prerequisite	C	Assessment mode	Type
Fluid Mechanics	2.1	Analyse transitions, hydraulic jumps, uniform flow and gradually varied flow in steady open channel hydraulics	ABCD 123	4	WXYZ 456	✓	Test	C, I, M
	2.2	Analyse and design simple pipe networks	ABCD 123	3	WXYZ 456	✓	Test	C, I M
	2.3	Analyse problems in fluid mechanics from first principles using approximations to the Navier Stokes equations				✓	Exam	C, I, A
Structures	1.1							
	1.2							

Key:

#	A unique learning outcome	C	Ticked if this learning outcome is a compulsory component of the programme. If unticked it is an elective
Description	A clear description of the learning outcome	Assessment mode	All assessments used to evaluate the learning outcome are listed, provided they contribute to at least 10% of the course
Prerequisite	Course prerequisites required	Type	A set of codes describing the assessment (Note: TEOs may introduce its own assessment codes but these must be clearly defined: • **C** (controlled or invigilated) • **N** (not controlled) • **G** (group) • **I** (individual) • **M** (mastery based) • **A** (achievement based)

TABLE 2: ACCORD ATTRIBUTES

The Accord Attributes table builds on the Body of Knowledge table to demonstrate how the full range of graduate attributes is developed and assessed through the programme. One table is to be completed for each Accord Attribute, however, to avoid duplication with the Body of Knowledge table, it is not necessary the replicate coverage of WA1/SA1/DA1 within the Accord Attributes Table.

WA/SA/DA Attribute [Insert Attribute number and title]							
Insert general description of approach including extent to which development of this attribute is scaffolded through the programme. This should include reference to any course in which the attribute may be introduced or perhaps considered as a design/project consideration without formal assessment.							
Year	**Course/ Paper details**				**Formal alignment of Graduate Attribute with course learning outcomes/ assessment**		
	Code	**Title**	**Credit value**	**Compulsory /Elective?**	**Learning outcome**	**Assessment mode**	**Assessment weighting**
Year 1							
Year 2							
Year 3							
Year 4							

TABLE 3: ACADEMIC STAFF

An overview of staff involved in delivering the programme.

Name	Position	Discipline	Qualifications	Professional memberships	Service (years)	FTE	Type
Joe Bloggs	Senior Lecturer	Transport and design	BE(Hons), PhD	CMEngNZ CPEng	15	1.0	P
Mary Jones	Professor	Fluid mechanics and mathematics	BE(Hons), PhD	FEngNZ	10	1.0	P
Peter Smith	Senior Tutor	Mechanics	BE(Hons)	MIMechNZ	2	0.5	T

Key:

Name: Staff member's name

Position: Academic position

Discipline: Academic discipline(s) the staff member teaches

Qualifications: Academic qualifications

Professional memberships: Professional body/learned society affiliations and/or registrations

Service: Length of service at the TEO

FTE: Full time equivalent

Type: Type of employment: **P** (on-going, permanent) or **T** (temporary or contract)

TABLE 4: SUPPORT STAFF

An overview of the staff who support the programme.

Name	Position	Discipline	Qualifications	Service (years)	FTE	Type
Jane Brown	Technician	Geomechanics laboratory	NZCE	30	1.0	P
John Doe	Administrator	Department admin team	BA	10	0.8	P
Ann Watson	IT support	Computer suite	BSc	6	0.7	P

Key:

Name: Staff member's name

Position: Position

Area: Area they work in

Qualifications: Qualifications

Service: Length of service at the TEO

FTE: Full time equivalent

Type: Type of employment: **P** (on-going, permanent) or **T** (temporary or contract)

TABLE 5: FACILITIES AND EQUIPMENT

An overview of the facilities specifically dedicated to programme delivery. General institutional facilities are not included but may be included in the associated commentary.

Name	Purpose	Equipment	Space	Staff
Fluid labs	Provides laboratory experience in fluid mechanics – includes pipe system experiments and open channel flow model. Utilised for final year UG research projects.	Four (4) flumes Four (4) pipe systems	650 m^2	2 FTE
Computer suite	Provides computer workstations and study spaces for third and fourth year. Key analysis and design software as well as standard office tools are supported.	60 Windows workstations	250 m^2	1.5 FTE

Key:

Name:	Facility/equipment/resource name
Purpose:	Purpose of the facility in delivering the programme, and a description of the key resources provided by the facility
Equipment:	List of the major pieces of teaching equipment present in the laboratory/facility
Space:	Description of the space – typically floor area
Staff:	Number of support staff in the facility

TABLE 6: EXTERNAL ENGAGEMENT

This summarises staff engagement with the profession/industry. The focus is on the engagement with engineering practice. It does not include academic/ research engagement (such as editing or referring academic journal and papers, organising an academic conference etc), but leading a major industry sponsored research programme would qualify.

Name	Description	Period
Mark Knight	Member of Engineering New Zealand Standards and Accreditation Board Team Member for Engineering New Zealand accreditation visits	2012 – 2019 2015
Jane Smith	Member of code writing committee	2014 – 2016
Jack Williams	Design review for ABC Associates President of SESOC	2015 – 2016 2013 – 2015
Abby Wood	Delivering ten professional development workshops for NZGS on ground remediation	2016 – 2018

Key:

Name: Staff member's name

Description: Brief description of the nature of the engagement

Period: Period over which this engagement took place