



## **POSITION DESCRIPTION – Professional Services Staff For levels 6/7 and above**

Position Title: ANFF Additive Fabrication Engineer Level: 6/7  
Faculty/Division: Research Platforms/DVCRSF School/Unit: ANFF UOW Materials Node

### **Primary purpose of the position:**

This position will be required to work as part of the ANFF UOW Materials Node to design and print of 3D additive fabricated structures using metals, polymers ceramics or biogels, utilising a range of additive fabrication tools and protocols. The position will be part of a multidisciplinary team, working to support commercial and academic researcher clients on a fee-for-service basis. The incumbent will be critical in developing new techniques and opportunities within the additive fabrication capability as well as maintaining state-of-the-art technologies to deliver outcomes to clients of highest quality.

The key challenges in this role include:

1. Implementation and development of user design concepts and their translation into tangible devices utilising ANFF supported 3D additive fabrication hardware and software tools.
2. Production and testing of designed components and devices to meet the user requirements.

### **Position Environment:**

The position is within the Australian National Fabrication Facility (ANFF) UOW Materials Node. The Australian National Fabrication Facility (ANFF) is one of the nine original research infrastructure nodes established and funded externally under the Commonwealth's National Collaborative Research Infrastructure Strategy (NCRIS). The expertise available at ANFF UOW Materials Node offers extensive and unique capabilities in the design, development, and synthesis of materials and 3D fabricated devices. The ANFF UOW Materials Node is part of a broader UOW Research Platforms capability and is physically located on the UOW's Innovation Campus. The ANFF Materials Node consists of two collaborating partners constituting UOW as the leading member and the University of Newcastle (UON). UON provides polymer electronic printing capabilities and reports on its activities to the Director of Materials Node at UOW.

The activities within ANFF UOW Materials Node strongly support research endeavours of UOW's Faculties and Research Entities. It is also highly involved in the provision of research services to widely ranging internal and external stakeholders, including but not limited to other Australian and international academic institutions, industry partners, government agencies and departments. The ANFF UOW Materials Node addresses strategic priorities of the University targeted at enhancing UOW's national and international research reputation, driving and growing research translation capabilities.

## Major Accountabilities/Responsibilities:

Responsibilities		Outcome	Percentage of Time
1.	Preparation of device design (CAD) and supported Additive Fabrication services as directed for ANFF Materials Node user projects based on verbal and written interactions with its clients.	Supply of services to ANFF Materials Node clients	25
2.	Assist with the development, production, implementation and user training of ANFF Materials Node additive fabrication systems, specifically for metals, ceramics, polymers and biogels.	Development of new techniques and processes to deliver value added outcomes to ANFF Materials Node's clients	25
4.	As directed and trained, undertake maintenance and operation of additive fabrication tooling and related infrastructure	Ongoing operation of key ANFF Materials Node's Infrastructure and equipment	25
5.	Preparation of ANFF reports and key performance indicator records, assisting with workshops and preparation of and publicity materials.	To ensure contracted ANFF Materials Node's key performance indicators are met.	20
6.	Prepare demonstrations for visitors (academic, industry, public and government parties)	Showcasing of the ANFF Materials Node's capabilities to prospective users	5
7.	Supervisory roles: Communicate and consult with staff on workplace and staffing matters. The role will also provide mentorship and training of HDR candidates in relation to the supported additive fabrication tooling.	To foster direct relationships with staff and enhance engagement with the organisation.	Ongoing
8.	Observe principles and practices of Equal Employment Opportunity	To ensure fair treatment in the workplace	Ongoing
9.	Have WH&S responsibilities, accountabilities and authorities as outlined in the <a href="http://staff.uow.edu.au/ohs/commitment/responsibilities/">http://staff.uow.edu.au/ohs/commitment/responsibilities/</a> document	To ensure a safe working environment for self & others.	Ongoing

## Reporting Relationships:

Position Reports to:	Director ANFF Materials Node
The position supervises the following positions:	Nil
Other Key Contacts:	Manager ANFF Materials Node, Executive Director, Research Platforms

## Key Relationships:

### Contact/Organisation:

Director ANFF Materials Node

### Purpose & Frequency of contact

Weekly, strategic planning, client and technical meetings, KPI and related reporting

Manager ANFF Materials Node

Day to day supervision and operational matters, technical operational meetings

## Key Challenges:

1. Specialised Additive Fabrication service provision to ANFF Clients.
2. Development of new methods and capabilities with ANFF equipment and infrastructure.
3. Diverse nature of the client base (University, Government, Established Industry and Start-ups)
4. Meeting Key Performance Indicators set by ANFF Ltd. (NCRIS)

## SELECTION CRITERIA:

### Essential:

- Degree in relevant field such as materials science or suitable engineering discipline or higher.
- Demonstrated experience of engineering design, using CAD/CAM design software, 3D modelling software suites such as Solidworks and/or animation.
- Demonstrated operational experience of Additive Fabrication / 3D Printing systems.
- Well-developed oral communication and interpersonal skills with the ability to train users in additive fabrication design including CAD modelling and reverse engineering software, additive fabrication equipment operation and best practice, and post processing/ finishing techniques for 3D printed alloys and/or ceramics and/or polymers.
- Well-developed writing skills with a demonstrated ability to write technical and final project reports.
- Demonstrated knowledge of WH&S regulations and procedures

### Desirable (if applicable):

- Knowledge and experience of ISO Quality standards and their implementation (9001 and/or 13485).
- Ability to learn, adopt and operate new technologies related their specific area of expertise when acquired UOW via NCRIS and its associated partners.
- Knowledge of and experience in complimentary polymer/metal machining and coating techniques.

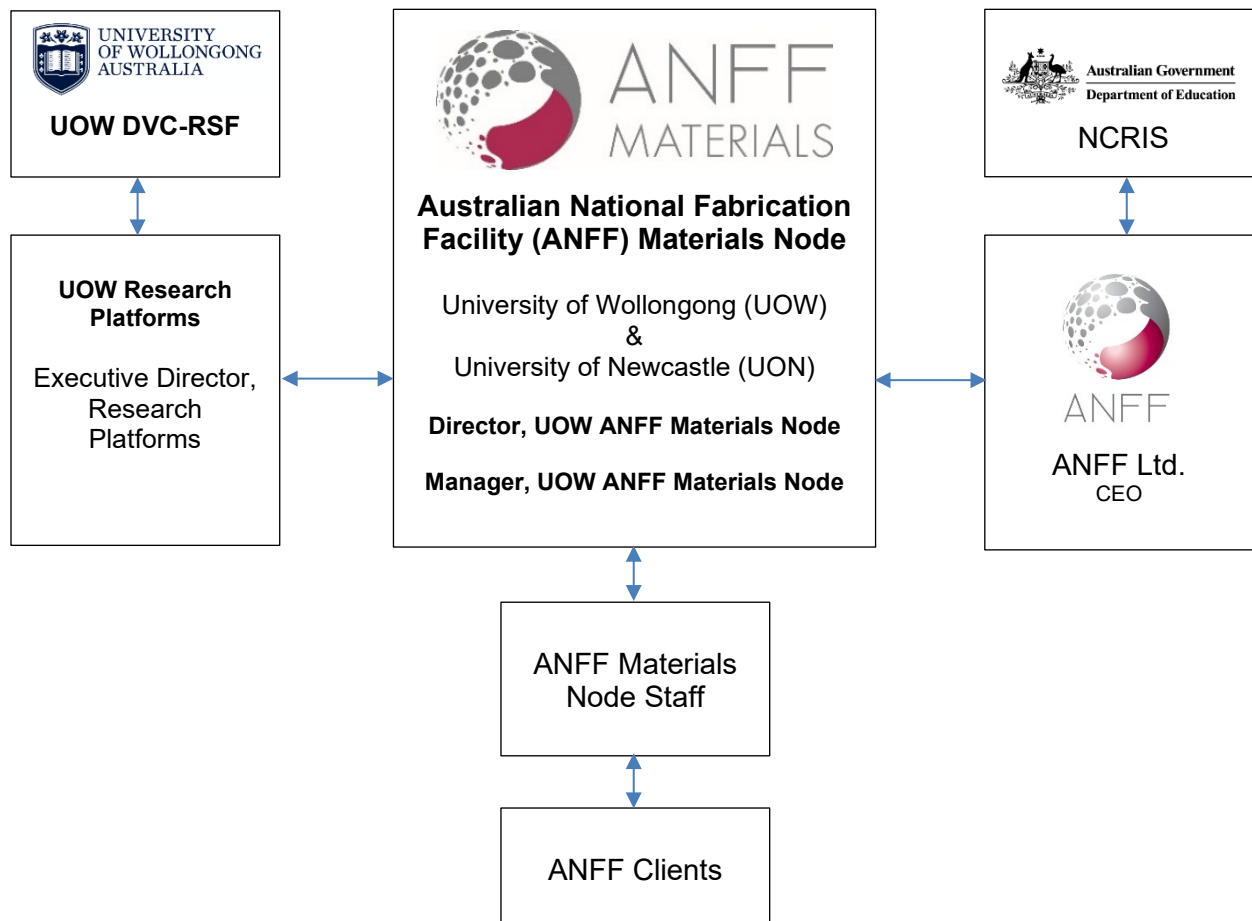
## Personal Attributes:

- Demonstrated ability to work with a diverse range of client users of the ANFF Materials Node
- Demonstrated client base work focus.
- Motivated to achieve work/research goals and work independently when required.
- Enthusiasm for design, problem solving and teamwork.
- Geared towards cooperation, enthusing, and educating others with a flexible approach to work assignments.
- Look for technical additive fabrication solutions through available resources.

## Special Job Requirements:

- May be required to work outside of standard business hours or across campuses and research partner facilities.
- Conduct OH&S inductions to workplace and laboratory procedures. This person must adhere to safe laboratory practices of UOW Research Platforms.
- Handling of high-risk chemicals in a risk-controlled environment will be a part of this role.

## Organisational Chart:



## Roles and Responsibilities in Relation to Workplace Health and Safety:

The University of Wollongong is committed to providing a safe and healthy workplace for its workers, students and visitors. All members of the University community have a collective and individual responsibility to work safely and be engaged in activities to help prevent injuries and illness.

In addition to the major accountabilities/responsibilities required for your position, you also hold the following roles and responsibilities in relation to Workplace Health and Safety:

### *All Staff*

- Take reasonable care for your health and safety as well as others.

- Comply with any reasonable instruction by the University.
- Cooperate with any reasonable policies and procedures of the University including reporting of hazards or incidents via the University reporting process.
- Certain staff have specific responsibilities for Work Health and Safety (WHS), further information is available in the document [Roles And Responsibilities for WHS](#) and [WHS Management System](#).

## **Inherent Requirements:**

This position description outlines the major accountabilities/responsibilities and the selection criteria against which you will be assessed as suitable for the position. As such there will be specific job requirements that we refer to as Inherent Requirements.

Inherent Requirements refer to your ability to:

- Perform the essential duties and functional requirements of the job;
- Meet the productivity and quality requirements of the position;
- Work effectively in the team or other type of work organisation concerned; and
- Do the job without undue risk to your own or others health, safety and welfare at work.

If you have any injuries, illness, disorder, impairment, condition or incapacity that may affect your ability to perform the inherent requirements of the position, we encourage you to discuss this with the University to assist in the process of identifying reasonable adjustments to enable you to perform the duties of the position. The University wants to place you in the best situation to use your skills effectively in the position you are applying for at the University.