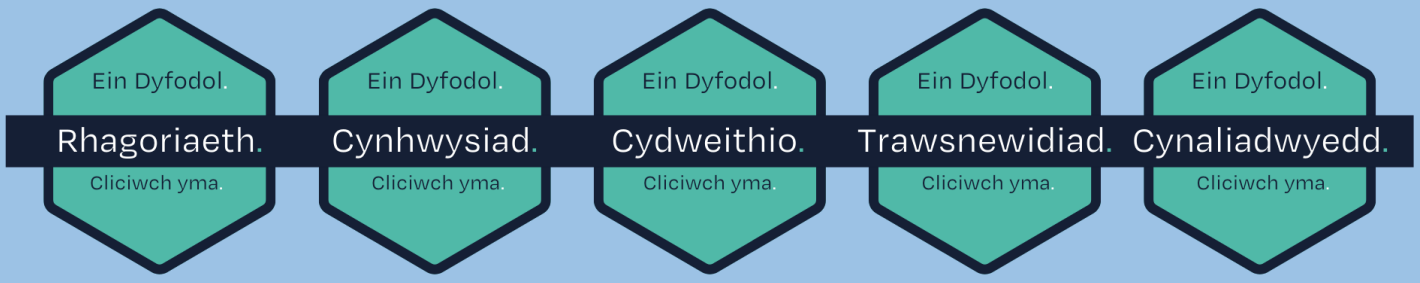
Swydd Ddisgrifiad

Prifysgol Wrecsam
Wrexham University



Cyfadran/Adran	Canolfan Dechnoleg OpTIC, Llanelwy
Adran	Glyndwr Innovations Ltd
Teitl y Swydd	Peiriannydd Dylunio Mecanyddol
Yn atebol i	Uwch Beiriannydd
Yn gyfrifol am	Peirianneg a Dylunio
Gradd	S&AP1

Prif Atebolrwydd

Yn atebol i'r Prif Beiriannydd, bydd deiliad y swydd yn gweithio o fewn Glyndwr Innovations Ltd (is-gwmni y mae Prifysgol Wrecsam yn llwyr berchen arno).

Prif gyfrifoldebau'r Peiriannydd Dylunio fydd gweithio gyda'r cwsmer masnachol i greu dealltwriaeth o'u gofynion; i greu dyluniadau terfynol a chysyniadau ar gyfer systemau optegol cymhleth ar sail y gofynion hyn, gan gynnwys cynulliadau opto-fecanyddol a strwythurol; i gynhyrchu dogfennaeth o gyfarfodydd adolygu i gefnogi'r dyluniad terfynol; i gynhyrchu'r pecyn data gweithgynhyrchu (darluniau, BOM, cyfarwyddiadau cynnull etc.).

Tasgau Allweddol

- Bydd yr ymgeisydd llwyddiannus yn gweithio ar becynnau gwaith y cytunwyd arnynt gyda'r Prif Beiriannydd, heb fawr ddim goruchwyliaeth.
- Datblygu a chynnal cysylltiadau gyda chwsmeriaid allweddol (mewnol ac allanol) i egluro, cadarnhau a cyflawni gofynion technegol a chwmpas gwaith y cytunwyd arnynt.
- Mynychu cyfarfodydd tîm a gynhelir i sefydlu rhaglenni gwaith, gofynion cwsmeriaid a manylebau technegol yn rheolaidd, a chynnig syniadau a chysyniadau dylunio i gael eu hystyried yn y cyfarfodydd hyn.
- Cymryd rhan weithredol ym mhrosesau cynllunio prosiectau GIL, gan gynnwys asesu galluoedd a blaenoriaethau gwaith.
- Darparu datrysiadau dylunio strwythurol ac opto-fecanyddol i ofynion cwsmeriaid.

- Darparu gwiriadau dylunio opto-fecanyddol a strwythurol gan ddefnyddio dadansoddiadau elfennau penodol a thechnegau efelychu deinamig i arddangos perfformiad dylunio ac addasrwydd at y diben.
- Cymryd rhan mewn gweithgareddau datrys problemau, gan ddarparu arbenigedd medrus yn ôl yr angen.
- Darparu a chyfathrebu adroddiadau adolygu dylunio yn unol â gweithdrefnau mewnol a gofynion cwsmeriaid, fel y cytunwyd arnynt gyda'r Prif Beiriannydd.
- Cyfrannu at adolygiadau dylunio cwsmeriaid a mewnol.
- Cynhyrchu a gwirio darluniau cynulliad/manwl yn unol â'r Safonau Peirianneg perthnasol (yn arbennig, BS 8888 ac ISO 10110).
- Adolygiad darlun terfynol a chymeradwyo darluniau prosiectau GIL, yn derbyn manylebau cwsmeriaid terfynol.
- Cynhyrchu canllawiau ysgrifenedig, gweithdrefnau neu ganllawiau gwaith i'w defnyddio gan GIL.
- Cynorthwyo gyda manyleb a chaffael offer cyfalaf ar gyfer GIL neu ddefnydd cwsmeriaid.
- Defnyddio offer mesureg ar gyfer archwilio a gwirio rhannau gwneuthuredig.
- Cefnogi'r genhedlaeth nesaf o Beirianwyr Dylunio (graddedigion, israddedigion, prentisiaid, myfyrwyr lleoliad gwaith, etc.) drwy hyfforddiant yn y swydd a datblygiad proffesiynol parhaus.
- Cadw cofnodion cywir o waith a gwblhawyd ar gyfer pob prosiect unigol.
- Darparu datrysiadau o'r radd flaenaf, trwy ddatblygiad proffesiynol parhaus a gweithgareddau ymchwil (deunyddiau, technegau gweithgynhyrchu, etc.)

Nodweddion Arbennig

Teithio i safleoedd cwsmeriaid fel rhan o GIL (teithio yn y DU a thramor o bosib).

Dyletswyddau Cyffredinol

Byddwch yn sicrhau bod systemau a gweithdrefnau rheoli priodol ar waith er mwyn bodloni'ch dyletswyddau a'ch cyfrifoldebau iechyd a diogelwch a geir ym mholisi iechyd a diogelwch y Brifysgol. Yn benodol, byddwch yn sicrhau bod asesiadau risg priodol yn cael eu cynnal mewn perthynas â pheryglon sylweddol ac yr ymgymerir ag arolygon diogelwch o leiaf unwaith y flwyddyn ym mhob gweithle dan eich rheolaeth chi.

Cyfrifoldeb y gweithwyr yw ymgorffori Polisi Cyfle Cyfartal y Brifysgol o fewn eu maes cyfrifoldeb eu hunain ac yn eu hymddygiad cyffredinol.

Mae gan yr holl staff gyfrifoldeb am hyrwyddo gofal cwsmer o ansawdd yn eu meysydd cyfrifoldeb eu hunain.

Rhaid i staff fod yn ymwybodol o ymrwymiad y Brifysgol i Gynaliadwyedd.

Rhaid i bob aelod o staff hyrwyddo ymddygiad iach ac iechyd meddwl a llesiant cadarnhaol.

Disgwylir i ddeiliaid swydd gydymffurfio â'r broses Adolygu Datblygiad Proffesiynol, gan gymryd rhan wrth osod amcanion er mwyn cynorthwyo gyda'r gwaith o fonitro perfformiad a datblygiad yr unigolyn.

Byddwch yn asesu anghenion hyfforddiant a datblygiad pob aelod o staff dan eich rheolaeth i sicrhau eu bod yn cael eu cefnogi'n ddigonol mewn perthynas â'u cyfrifoldebau yn y gwaith.

Dyletswyddau perthnasol eraill sy'n gymesur â gradd y swydd, a all gael eu neilltuo gan y Rheolwr, mewn cytundeb â deiliad y swydd. Ni ddylid gwrthod cytundeb o'r fath yn afresymol.

Mae'r cyfrifoldebau allweddol sydd wedi'u cynnwys yn y swydd ddisgrifiad hwn yn rhai nodweddiadol; nid ydynt yn gynhwysfawr. Gellir addasu dyletswyddau a chyfrifoldebau mewn trafodaeth â deiliad y swydd.

Disgwylir i'r holl ddeiliaid swydd yn y Gyfarwyddiaeth allu cynnig cymorth ar draws pob maes, y tu hwnt i'w tîm uniongyrchol, ar gais y Cyfarwyddwr ac yn gymesur â'u sgiliau, eu gwybodaeth a'u profiad.

Adolygu

Mae hwn yn ddisgrifiad o'r swydd adeg ei chyhoeddi. Arfer y Brifysgol o bryd i'w gilydd yw adolygu a diweddaru swydd ddisgrifiadau er mwyn sicrhau eu bod yn adlewyrchu natur gyfredol y swydd a gofynion y Brifysgol yn gywir ac i ymgorffori newidiadau rhesymol pan fo angen, mewn ymgynghoriad â deiliad y swydd.

Manyleb Person

Prifysgol Wrecsam
Wrexham University

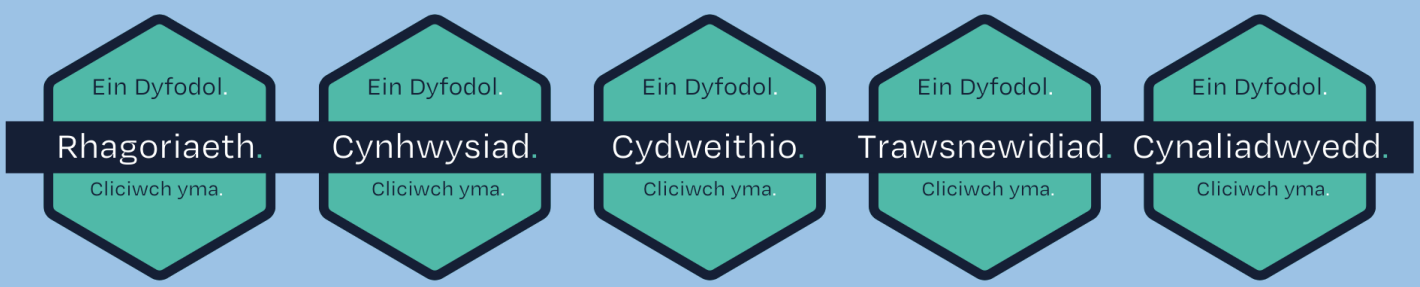
Teitl y Swydd: Peiriannydd Dylunio Mecanyddol

Er mwyn cael eich rhoi ar y rhestr fer, mae'n rhaid i chi ddangos eich bod yn diwallu pob un o'r meini prawf hanfodol a hynny o'r meini prawf dymunol ag sy'n bosibl. Pan fydd gennym nifer fawr o geisiadau sy'n diwallu'r holl feini prawf hanfodol, byddwn wedyn yn llunio'r rhestr fer gan ddefnyddio'r meini prawf dymunol.

Meini Prawf Dethol					
Priodoleddau		**Eitem**	**Meini Prawf Perthnasol**	**Dull Adnabod**	**Pwysigrwydd**
1	Sgiliau a Galluoedd	1.1	Lefel dda o sgiliau TG (Microsoft Office, Project, CAD etc.).	Ff, C	H
		1.2	Dylunio peirianneg o fewn amgylchedd peirianneg optegol arbenigol.	Ff, C	H
		1.3	Dadansoddiad elfennau penodol strwythurau.	Ff, C	H
		1.4	Sgiliau cyfathrebu rhagorol yn ysgrifenedig ac ar lafar yn cynnwys sgiliau cyflwyno ac ysgrifennu adroddiadau manwl a chryno.	Ff, C	H
		1.5	Dadansoddiad elfennau penodol llif gwres.	Ff, C	D
		1.6	Amcangyfrif cost.	Ff, C	H
		1.7	Llif gwaith a chynllunio prosiect.	Ff, C	H
2	Gwybodaeth Gyffredinol ac Arbenigol	2.1	Drafftio profiad gan ddefnyddio safonau diwydiant BS 8888 (gan gynnwys GD&T), ISO 10110, etc.	Ff, C	H
		2.2	Dilysu dyluniadau / gwirio strwythurau gan ddefnyddio FEA.	Ff, C	H
		2.3	Technegau efelychu deinamig gan ddefnyddio FEA.	Ff, C	D

3	Addysg a Hyfforddiant	3.1	Myfyriwr graddedig â gradd neu lefel uwch mewn disgyblaeth peirianneg fecanyddol.	Ff,C,T	H
		3.2	Bydd yr ymgeisydd llwyddiannus yn Siartredig.	Ff,C,T	D
4	Profiad Perthnasol	4.1	Profiad dylunio peirianneg o fewn amgylchedd peirianneg optegol arbenigol.	Ff, C	H
		4.2	Cynhyrchu ariannol a phrisio deunyddiau.	Ff, C	H
		4.3	Profiad o ddilysu / gwirio dylunio drwy FEA a thechnegau efelychu deinamig.	Ff, C	H
		4.4	Profiad dylunio yn defnyddio safon diwydiant (Inventor, Solidworks,etc.) Pecyn CAD	Ff, C	H
		4.5	Profiad o weithio mewn tîm Peirianneg aml-ddisgyblaeth.	Ff, C	H
		4.6	Profiad ymarferol peirianneg neu fecanyddol o fewn amgylchedd masnachol (peirianneg opto-fecanyddol yn ddelfrydol).	Ff, C	H
5	Gofynion Arbennig	5.1	Y gallu i deithio (y tu allan i'r DU o bosib) i fynychu cyfarfodydd adolygu ar safleoedd y cwsmeriaid.	Ff, C	H
		5.2	Parhau â datblygiad proffesiynol a fydd yn gwella galluoedd y tîm.	Ff, C	H
		5.3	Y gallu i gyfathrebu drwy gyfrwng y Gymraeg.	Ff, C	D
Dyddiad Adolygu			Mehefin 2025		

Allwedd	**Dull Adnabod**	**Ff**	Ffurflen Gais
		C	Cyfweliad
		P	Prawf
		T	Copi o Dystysgrifau
		Rh	Rhoi Cyflwyniad
		G	Asesiad Grŵp
	Pwysigrwydd	**H**	Hanfodol
		D	Dymunol



Job Description

Prifysgol Wrecsam
Wrexham University

Faculty/Department	OpTIC Technology Centre, St Asaph
Section	Glyndwr Innovations Ltd
Job Title	Mechanical Design Engineer
Reports to	Principal Engineer
Responsible for	Engineering & Design
Grade	S&AP1

Principal Accountabilities

Reporting to the Principal Engineer, the post holder will work within Glyndwr Innovations Ltd (a wholly-owned subsidiary of Wrexham University).

The key responsibilities of the Mechanical Design Engineer will be to work with the commercial customer to create an understanding of their requirements; to create concept and final designs of mechanical systems for complex optical systems. Typical clients requirements, including opto-mechanical and structural assemblies; contribute to review meetings and documentation to support the final design; to produce the manufacturing data pack (drawings, BOM, assembly instructions, etc.).

Key Tasks

- The successful candidate will work largely unsupervised on work packages agreed with the Principal Engineer and Senior Design Engineers.
- With Engineering team develop and maintain relationships with key customers (internal and external) to clarify, confirm and deliver agreed technical requirements and work scope.
- Regularly attend and contribute to team meetings held to establish work programmes, customer requirements and technical specifications and to input design ideas and concepts for consideration into these meetings.

- Actively participate in GIL project planning, including the assessment of work priorities and capacity.
- Provide structural and opto-mechanical design solutions to customer requirements.
- Provide validation/verification of designs using FEA, for static, thermal and dynamic simulation techniques to demonstrate design performance and fitness for purpose.
- Participate in design problem solving activities, providing specialist expertise as and when required.
- Provide and communicate design review reports in accordance with internal procedures and customer requirements as agreed with the Principal Engineer and Senior Design Engineers..
- Contribute to both internal and customer design reviews.
- Production of and checking of assembly / detailed design drawings in line with relevant Engineering Standards (in particular, BS 8888 & ISO 10110).
- Final drawing review and sign-off of GIL project drawings against final customer specifications.
- Production of written guidelines, procedures or work instructions for GIL use.
- Assist with the specification and procurement of capital equipment for GIL or customer use.
- Use of material testing equipment for inspection and verification of components.
- With the Principal and Senior Engineers support the development of the next generation Design Engineers (Degree apprentices, undergraduates, placement students).
- Keep accurate time sheet records of work completed for each individual project.
- Contribute to innovative technologies and research activities to future-proof the company's competitive position within the respective sectors of space, aerospace, defence and biomedical.

Special Features

Travel as part of GIL to customer premises (UK travel and possibly abroad).

General Duties

You will ensure that appropriate management systems and procedures are in place to meet your health and safety duties and responsibilities contained within the University's health and safety policy. In particular you will ensure that appropriate risk assessments are carried out in respect of significant hazards and that safety inspections are undertaken on at least an annual cycle in each workplace under your control.

It is the responsibility of employees to apply the University's Equal Opportunities Policy in their own area of responsibility and in their general conduct.

All staff have a responsibility for promoting high levels of customer care within their own areas of responsibility.

Staff must be aware of the University's commitment to Sustainability.

All staff must promote healthy behaviour and positive mental health and wellbeing

Post holders are expected to co-operate with the Professional Development Review (PDR) process, engaging in the setting of objectives in order to assist in the monitoring of performance and the development of the individual.

You will assess the training and development needs of each member of staff under your control to ensure they are adequately supported in relation to their work responsibilities.

Such other relevant duties commensurate with the grade of the post as may be assigned by the Manager in agreement with the post holder. Such agreement should not be unreasonably withheld.

The key responsibilities contained in this job description are indicative not exhaustive. Duties and responsibilities may be altered in discussion with the post holder.

All post-holders within the Directorate are expected to be able to provide support across all areas, beyond their immediate team, as requested by the Director and commensurate with their skills, knowledge and experience.

Review

This is a description of the job at the time of issue. It is the University's practice periodically to review and update job descriptions to ensure that they accurately reflect the current nature of the job and requirements of the University and to incorporate reasonable changes where required, in consultation with the job holder.

Person Specification

Prifysgol Wrecsam
Wrexham University

Job Title: Mechanical Design Engineer

In order to be shortlisted you must demonstrate that you meet all the essential criteria and as many of the desirable criteria as possible. Where we have a large number of applications that meet all of the essential criteria, we will then use the desirable criteria to produce the shortlist.

Selection Criteria					
Attributes		**Item**	**Relevant Criteria**	**Identification Method**	**Rank**
1	Skills & Abilities	1.1	Good working level of IT skills (Microsoft Office, Project, CAD etc.).	A,I	E
		1.2	Engineering design within mechanical/glass/optical engineering environment.	A,I	E
		1.3	Finite element analysis static simulation techniques	A,I	E
		1.4	Finite element analysis thermal and dynamic simulation techniques	A,I	D
		1.5	Excellent written and verbal communication skills, including consise and detailed report writing and presentation skills.	A,I	E
		1.6	Cost estimation.	A,I	D
		1.7	Work flow and project planning.	A,I	E
2	General & Specialist Knowledge	2.1	Drafting experience using industry standards BS 8888 (including GD&T), ISO 10110, etc.	A,I	E
		2.2	Design validation / verification of structures using FEA.	A,I	E
		2.3	Dynamic simulation techniques using FEA.	A,I	E
3	Education & Training	3.1	Degree qualified graduate or higher in a mechanical engineering discipline.	A,I,C	E
		3.2	Incorporated/Chartered Engineer.	A,I,C	D

4	Relevant Experience	4.1	Engineering design experience within mechanical engineering environment.	A,I	E
		4.2	Engineering design experience with optimechanical engineering environment	A,I	D
		4.3	Knowledge of financial and materials costing.	A,I	D
		4.4	Experience in design validation / verification using FEA and dynamic simulation techniques.	A,I	E
		4.5	Design experience using an industry standard (Inventor, Solidworks, etc.) CAD package	A,I	E
		4.6	Experience of working within a multi-disciplinary Engineering team.	A,I	E
		4.7	Significant practical engineering or mechanical experience within a commercial environment (preferably opto-mechanical engineering).	A,I	E
5	Special Requirements	5.1	The ability to travel (possibly outside the UK) to attend review meetings at the customer's premises.	A,I	E
		5.2	Continuing professional development that will improve the team's capabilities.	A,I	E
		5.3	The ability to communicate in the medium of Welsh.	A,I	D
Date of Revision			June 2025		

Key	**Identification Method**	**A**	Application Form
		I	Interview
		T	Test
		C	Copy of Certificates
		P	Presentation
		G	Group Assessment
	Rank	**E**	Essential
		D	Desirable