

Faculty of Arts, Computing, Engineering and Sciences

Technical Resources Handbook



2017 - 2018 Session

03	Foreword by Professor Roger Eccleston Pro Vice-Chancellor - Faculty of Arts, Computing, Engineering and Sciences
04	Introduction
06	Campus Map
08	Purchasing Goods from Faculty Resource Centres
09	Health and Safety
	Technical Resource Centres
14	Sheaf & SIA Workshops
34	Creative Media Centre Creative Media Support Desk Photographic darkrooms and studios Performance, Setbuild and Protocols studios Cantor TV and Radio studio Apple & PC IT labs, Video/Sound Edit suites and Animation suite
52	Fashion Centre
56	Printmaking Centre
64	Digital Design Centre Art & Design Support Desk Computer-aided Engineering Support Desk
70	Electronics and Communications Centre
75	Advanced Analytical Techniques
78	ACES IT Laboratories

Foreword by Professor Roger Eccleston

I am delighted to welcome you to our Technical Resources Handbook for the Faculty of Arts, Computing, Engineering and Sciences (ACES) at Sheffield Hallam University. The Faculty of ACES encompasses a broad range of disciplines, bringing together technical and creative subjects and linking undergraduate and postgraduate teaching with world-leading research. The working environment is designed to provide outstanding facilities to support specialist areas of study while also encouraging cross-disciplinary interaction and fostering a dynamic working environment, in which engineering can inform fashion design or art can inform computer science. This unique opportunity to work across traditional subject boundaries, to access facilities and expertise outside of conventional disciplines, lies at the heart of the ethos of the faculty.

In recent years we have invested heavily in our facilities, including our workshops, studios, computer suites and engineering laboratories, so you will find them amongst the very best available in any university in the UK, giving you access to state of the art equipment, software and other resources.

However, the most valuable resource you will have at your disposal during your time at Sheffield Hallam is access to our dedicated, experienced staff. The technical team within ACES, with its professionally qualified staff and practicing professionals, has a wealth of expertise across all areas of our provision and comprises engineers, scientists, designers, silversmiths and jewellers, fine artists and media arts specialists. The team are committed to using their diverse range of skills and knowledge to support practical aspects of your work, whether it is producing a complex engineering project or creating design work for an international exhibition.



Professor Roger Eccleston

Pro Vice-Chancellor, Faculty of Arts, Computing, Engineering and Sciences

Email r.eccleston@shu.ac.uk

Welcome to the ACES Technical Resources Handbook

In this handbook you will find invaluable information on the resources available to you in the Faculty, introducing you to the technical team, the location of facilities, opening hours and an overview of health and safety procedures.

Please take the time to familiarise yourself with this handbook in order to help you make the most of your time in ACES. Enjoy using the specialist facilities that are provided to enable you to develop and express your interest in your subject. Most importantly, work closely with the technical team from whom you can learn invaluable skills and who can help you effectively plan your safe use of our facilities.

There are currently 60 technical staff directly supporting the Technical Resource Centres and the research institutes of the faculty. Each Technical Resource Centre has a dedicated Team Leader responsible for ensuring that their centre provides the best possible support and learning experience for our students. They should be your first point of contact for advice and information.

The Technical Management Team provides the underpinning management, procurement and support frameworks to ensure we provide the best possible student experience.



Darren Sugden

Head of Technical Services



Mark Wild

Technical Manager
Creative Media Team



Terry Hudson

Technical Manager
Advanced Analytical Techniques
Electronics and Communications



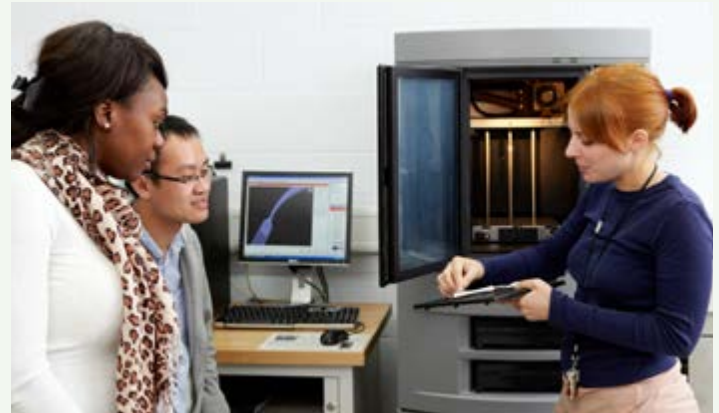
Adrian Christer

Technical Manager
Materials Design and
Engineering Team

New for the 2017-18 Session

We are continually striving to improve our services to students by investing in our equipment, workshops and laboratory infrastructures including:

- New Hertha Ayrton STEM Centre - the centrepiece of a £11m refurbishment of the Sheaf and Eric Mensforth Buildings bringing together Electronics and Communications with all other elements of the Engineering Department
- Various new hub spaces including Photography and Extended Degree
- New Engineering project spaces in the Eric Mensforth Building
- New VR and Motion Capture facilities and equipment in Harmer Building
- Additive Manufacturing Machine and 3D Metal Sintering facilities in Sheaf Workshops
- Addition of new Life Drawing and Fashion Management studios in Aspect Court
- Over £2m of capital investment in new equipment



City Campus



Cantor Building	Level 2	Journalism Newsrooms and studios, Creative Media Support Desk
Harmer Building	Level 3	Creative Media Centre: Support Desk, Photographic Darkrooms and Studios, Apple Mac labs, Video/Audio Editing Suites, Animation Studios
	Level 4	VR and Motion Capture facilities, Photo Hub
Sheaf Building	Level L	Sheaf Workshops: Precision Manufacturing, Materials Testing, CNC multi axis, Wood, metal, plastic and foam manipulation & equipment, Materials and Tools
	Level 0	Engineering Laboratories: Aerospace, Project labs, robotics, mechanics etc
	Level 2	Digital Design CAE Support Desk, IT Labs
	Level 3	Electronics & Communication, IT Labs
Aspect Court	Level 3	Fashion Management and Communication, Life Drawing studios
	Level 4	Extended Degree studio
Workstation Studios		Performance, Set build and Protocols Sound studios
Sheffield Institute of Arts	Level -1	Fine Metalworking, Materials and Tools, CNC, Laser Cutting, Workshop Digital Design Support Desk, Print Output Facilities, Photo Studio
	Level 0	SIA Showcase, Jewellery and Metalwork workshops, Fashion Management and Communication
	Courtyard	Printmaking Studio, Fine Art studio
	Level 3	Fashion Centre

Purchasing Goods from Technical Resource Centres

All Technical Resource Centres have a sales point where you can purchase a range of specialist materials.

- Sheaf Workshops, Materials and Tools Centre, Sheaf Level L, Room 4L02
- Creative Media Centre, Harmer Level 3, Room 2308

Sheffield Institute of Arts

- Digital Design Centre, Level -1
- SIA Workshops, Materials and Tools Centre, Level -1
- Fashion Centre, Level 3
- Printmaking Centre, Courtyard

The sales points operate a 'cashless' sales system, payment is via your SHUcard account. Sheaf Workshops and the Creative Media Centre can also accept payment by Debit/Credit Card.

Please note: We cannot take cash or cheques at the sales points. SHUcard payments require monetary credit in the relevant account.

Faculty of Arts, Computing, Engineering and Sciences

Health & Safety



Health & Safety - Please read the following pages

The University has an obligation to provide a safe working environment and safe systems of work for all staff and students. Access to facilities and equipment within the Technical Resource Centres is governed by the level of risk associated with working procedures and the required level of supervision.

Responsibility of students

You have an important role to play in implementing University policy. At all times you must:

- **Take all reasonable steps to ensure your own health and safety, and the health and safety of others**
- **Cooperate with the University regarding all health and safety arrangements (for example by attending any briefings or participating in any other safety induction processes)**
- **Report all accidents and incidents (including significant near misses), and bring to the attention of relevant academic or technical supervisors any concerns you have regarding health and safety**
- **Behave in a responsible and safe manner at all times, and take reasonable steps to encourage others to do so**



First Aid

During normal working hours, First Aid is provided by local First Aiders. Their names and telephone numbers are displayed on the green signs posted near to building exits or at the top of stairwells.

Outside of normal working hours, First Aid cover is provided by Security staff. They can be summoned by dialling 0114 225 2000 or 888 from a University phone to inform them of the accident and your location.

As required, Security Control will call the Ambulance Service on your behalf as they will be able to direct them to the incident more accurately.

Please note: In life threatening situations e.g. where the casualty is unconscious or is having a suspected heart attack, stroke etc, then in order to save vital time anyone can dial 999 (internally) direct, however, they must always get someone to contact Security on the internal emergency number 888 to let them know their location so they can provide extra assistance if needed and meet the ambulance.



Risk assessment

Whilst most of the routine activities within workshops and laboratories have been risk assessed on your behalf, you will need to carry out risk assessments for any research work, some final year projects and assignments, degree show exhibitions and any off-site activities such as film shoots, interviews with members of the public etc. You will be advised by your tutors and technical staff of this requirement.

Please discuss your project or activity with your Tutor or member of staff to determine if you need to carry out a risk assessment.



Fire safety

In the event of fire:

- DO exit quickly and calmly
- DO follow the nearest green Fire Exit Signs
- DO go directly to open air
- DO close the door behind you
- DO NOT enter an adjacent building
- DO NOT stop to collect bags
- DO NOT use lifts
- DO NOT re-enter the building until instructed to do so

Students should get to know their assembly points which are indicated on the fire action notices displayed throughout the building.

If you discover a fire:

- Raise the alarm by breaking the glass of the nearest fire alarm call point. The 'break glass' fire alarm call points can be found on corridors and adjacent to final exit doors
- Inform Security Control by dialling 888 (from a safe place) and inform them of the fire, Security Control will then call the Fire Service
- Should there be any problem or delay in contacting Security Control, call the Fire Brigade direct by dialling 999 (or 9-999 on an internal phone) and give the correct address of the building and any other information they require. Inform Security that you have done this
- Leave the building by the nearest available exit route and report to a Fire Marshal, Security Officer or Fire Officer and provide them with details of the fire. Proceed to the assembly point or other location, as instructed.



Electrical safety

No item of electrical equipment, except double insulated phone or laptop chargers, can be brought into the University and connected to the electrical supply without prior approval from Technical Services. All approved items will need to be tested prior to use and any item failing must be removed from the premises. All student projects that involve mains electricity must be checked and approved prior to connection to the University electrical supply. A H&S Guidance note and risk assessment is available upon request from Technical Services.

Please note: any unapproved or untested items will be placed into safe storage until removed from the premises.



Working at height

Students & staff wishing to use ladders and stepladders must undergo a short training course before they can be used, so please allow for this in your planning. No ladders or stepladders will be issued unless the appropriate training has been completed.



Lone working

We ask students, staff & researchers that need to work late in the evenings or at week-ends to comply with the following: Only access the areas you have been approved to work in and, whenever possible, ensure you work with a colleague or group of colleagues. Risk assessment may be required for certain laboratories.

In the event of an emergency please ring 888 from an internal phone or ring 0114 225 2000 to contact the Security Control room, Level 5, Owen building

Note: Lone Working in laboratories and workshops is forbidden unless a risk assessment has been authorised by Technical Services

ACES Technical Resource Centres

Sheaf & SIA Workshops



Workshop Locations

Sheaf Building, Levels 0 and L.

Level L

Centred around an open plan workshop with woodworking and metalworking benches, are specialist facilities supporting a wide range of fabrication techniques:

Metal, wood, foam & plastic manipulation, Precision manufacturing, Structural integrity / materials testing, Micro structural analysis, Welding – gas, electric (MIG & TIG), Casting - metal, plaster & resins, Paint spraying & finishing techniques, Vacuum forming, Laser cutting, 3D Rapid prototyping & 3D printing, CNC routing & machining

Level 0

PCB electronics: Circuit board design & manufacture

Engineering teaching: Robotics, mechanics, metrology, aerospace and flight simulation, power & laboratories: transmissions, polymers & composites, automotives, and a range of project labs

SIA Building, Level -1

In addition to the open plan workshop with benches and equipment for wood, foam & plastic manipulation, are specialist facilities supporting a wide range of fabrication techniques:

Laser cutting, 3D Rapid prototyping & 3D printing, CNC routing & machining, Ceramics
Specialist Metalworking and Jewellery making

Please see pages 31-34 for a complete list of the equipment and facilities available in the workshops

Sheaf Workshops - Opening times 2017-18 Session

Undergraduate students will normally have access to the Sheaf Workshops as follows:

Semester 1

OPEN Weeks 10 to 21 (25 September to 15 December 2017)
CLOSED Weeks 22 and 23 (18 December 2017 to 1 January 2018)

Semester 2

OPEN Weeks 24 to 35 (2 January to 23 March 2018)
CLOSED Weeks 36 and 37 (26 March to 6 April 2018)
OPEN Weeks 38 to 45 (9 April to 1 June 2018)

Normal Opening Times

Monday 9am-5.15pm Tuesday - Thursday 9am-7.45pm* Friday 9am-4.15pm

*Evening arrangements run from November to the end of May but are subject to demand/staff availability. Please check locally displayed notices or with a member of the technical staff.

It may be necessary to temporarily close some workshop facilities at certain times of the day on supervision or health and safety grounds. Notices to this effect will be displayed on workshop doors.

Please note: There will be no undergraduate access to any Workshops outside of the stated opening times & working hours (except for approved referral)

Materials and Tools Centre

Sheaf Level L, Room 4L02

SIA Building Level, Room 16.-1.15

The Materials and Tools Centres are located adjacent to the workshop facilities and stock a wide range of products for purchase as well as providing a loan service for tools.

Opening times

Monday to Thursday 9am-12.30pm and 1.30-5pm (extended on late evenings)

Friday 9am-12.30pm and 1.30-4pm

What's available in the stores

- Materials – metal, plastics, foams and wood
- Consumables – fixings, adhesives & abrasives
- Tools – wide range of hand and power tools for loan
- Personal Protective Equipment - gloves, masks, goggles etc
- Advice – skill based & H&S guidance

Purchasing

All sales transactions are to be made via your SHUcard account (Chip & Pin available at Sheaf Building)

Please ensure that you have sufficient credit on your account to purchase the materials you require. Please note:

Please note: We do not accept cash or cheques

Sheaf and SIA Workshop Staff

The workshops are supported by two teams :

- **The Creative Arts Team**
- **The Structural Integrity / Engineering Team**

Staff are there to support you during your time in the workshops and Labs. Please feel free to approach them for information and advice, as they have a wealth of knowledge and experience and are highly qualified. Most are professional artists, engineers and practitioners in their own right.

The two Team Leaders should be your first point of contact when seeking advice on workshop techniques/ practices and will be able to direct you to the most appropriate person for your work.



Jon Wills

Creative Arts
Team Leader

Sheaf 4L06. Ext. 2604
Plaster & Bronze Casting
Exhibitions & Shows



Tim O'Hara

Structural Integrity & Engineering
Team Leader

Sheaf 4L21. Ext. 3448
Structural Integrity
Precision workshop

Meet the Staff - Creative Arts



Will Tierney
Laser cutting
2D & 3D CNC
5 axis Machining



Anna Wiggins
Wood Machining
Framing Techniques
Exhibitions Support



William Carr
Wood Machining
Workshop Support
Exhibitions Support



Tim Biggin
Metalworking & Machining
Welding & Fabrication
Paint Spraying



Mark Collier
Workshop Support
Laser Cutting
2D & 3D CNC



Kevin Pacey
Wood Machining
Wood Turning



Chris Amner
Wood Machining
Framing Techniques
Exhibitions Support



Nicola Rudge
Workshop Support
Materials and
Equipment



Karl Geleff
Plaster & Bronze Casting
Welding & Fabrication



Jim Eaton
Wood Machining
Exhibitions Support



David Powell
Workshop Support
Materials and
Equipment



Joe Haynes
Workshop Support
Ceramics



Steve Wood
Fine Metalworking
Silversmith



Roy Foster
Fine Metalworking
Jewellery



Carrie Dennis
Workshop Support
Exhibitions Support

Meet the Staff - Structural Integrity and Engineering



Phil Stevenson
Automotives
Structural Integrity
Mechanics
Flight Simulator



Ian Broome
Precision Workshop
2 & 3D CNC
5 axis Machining



Matthew Goodwin
Precision Workshop
CNC Machining



Jamie Boulding
Materials Engineering
Analysis & Testing



Robin Sykes
Precision Workshop
CNC Machining



Adrian Littlewood
General Engineering
Welding & Fabrication
Mechanics



Jeremy Bladen
Engineering/Analysis
Robotics



Tony Bellamy
General Engineering
Welding
Wind Tunnel



Dan Redding
Workshop Support
Materials and Equipment



Simon Apps
Materials
Engineering/Analysis

Access to workshop facilities

The facilities within the workshops can only be accessed after successful completion of the formal Workshop Skills Induction Phase 1 Programme.

[See page 24](#)

Due to the risks associated with the woodworking machinery in Sheaf 4L05 access is restricted to trained staff users only. Please contact a member of Technical Services if you need access to the processes in this area.



Assigned Referrals/Deferrals

Where students are required to complete referral work requiring access to workshop or lab facilities, academics will identify referral deadlines and make arrangements for individual students via the Technical Team Leader.



Workshop Skills Induction Programmes September 2017

As a student enrolled on one of the following courses you will automatically be allocated a place on the Workshop Skills Induction Programme.

Design courses

Furniture Design

Product Design

Interior Design

Design Technology and Education (DTE)

Metalwork & Jewellery

Fine Art courses

Contemporary Fine Art

Engineering Courses

Engineering Product Analysis

Students from other courses will be trained according to their needs or on request



Workshop Skills Induction Programmes - Phase 1 - core essentials

Phase 1 Training is specifically designed for all 1st year students that will require access to the workshop facilities as part of their course, but is essential for all users.

The core essential techniques are covered and every student needs to attend as part of their induction cycle. Training will include both theory and practice and attendance will be held on student record.

Core Techniques covered:

- Use of hand held power tools
- Use of a bandsaw & scroll saw – wood, foam & plastic
- Use of pedestal drill – wood, metal & plastic
- Sanding techniques – wood, plastic & foam
- Metalworking techniques – cutting, milling, turning, shaping & grinding
- Plastics manipulation – use of strip heater & vacuum forming

Each training session covers 3 essential components:

- Health and safety details specific to that particular technique
- A demonstration of the technique by a competent tutor
- Supervised 'hands on' interaction for each student

Workshop Skills Induction Programmes - Phase 2 - specialist techniques

Phase 2 Training is designed for more course specific techniques such as advanced woodturning or vacuum casting. A schedule will be produced and students will be timetabled to relevant techniques in co-ordination with their tutors.

Future developments to look out for

Technical Services are currently looking into the provision of extra skills teaching sessions to enhance students' practical skills. These sessions will provide students with the opportunity to develop particular skills that are important to them. Students will be invited to sign up for these sessions.

In some specialist areas this will include 'Masterclass' sessions where skilled practitioners will run scheduled events to help develop advanced skills for interested students.

Workshop safety

1 Workshop Equipment Traffic Light System

The main workshop equipment has been classified according to hazard rating.

In order to identify the particular hazard levels, a traffic light system has been developed for each activity.

Each piece of equipment is labelled with the appropriate symbol and health and safety guidance posters are located in each area where this applies.



An activity that must only be carried out by suitably trained and competent staff



An activity that may be accessed/used by trained students under the supervision of trained staff



An activity that may be accessed/used by trained students

2 Workshop rules

- Students must not attempt to use any equipment that they have not been trained to use.
- Personal protective equipment relating to the equipment/materials/processes being used must be worn e.g. safety glasses / helmets, safety shoes, ear protection and overalls etc. Safety footwear or enclosed shoes must be worn when entering the workshop – canvas shoes, sandals/flip-flops are not permitted.
- Loose clothing must be avoided and long hair tied back when working on machinery.
- Prior to use all guards must be in place, adjusted correctly and checked to ensure they are functional.
- All machine users must know where the emergency stop buttons are positioned on machinery or in the workshop.
- When working with hazardous substances, students must comply with the instructions provided, read the labels affixed to containers and adhere to hazard warnings.
- Students are responsible for ensuring good housekeeping in the area of the workshop they are using and generally.
- All accidents and incidents must be reported to local technical staff as soon as possible.
- Most injuries are caused by Stanley knives and chisels – it is important to keep both hands behind the cutting edge.
- Use of MP3 players/devices is not allowed.
- Food or drink must not be consumed in the workshops (bottled water permitted).
- Students should not enter the workshop if they are feeling tired or unwell.

Workshop technicians or teaching staff, can at any time deny a student access to the workshop or any workshop related equipment, if they fail to follow these rules.

3 Personal Protective Equipment (PPE) Guidelines

You will be issued with free eye protection for use in the workshops. Please remember to bring this with you to the workshops.

The extraction equipment is there to protect you, but occasionally there will be a need to wear a dust mask. These are available from the Materials and Tool Centre.

When handling paint, some adhesives, and chemicals you will be required to wear gloves. These are available in the rooms where the processes take place and from the Materials and Tool Centre.

Safety footwear will be required when accessing the Precision Workshop area 4L27.

In other areas of the workshops wear strong footwear that covers the top of the foot. If you are wearing 'unsuitable footwear', such as sandals or flip flops, you will be asked to leave the workshop.

Some processes such as casting and welding require specialist eye, face and skin protection. This will be provided for you and you will be given detailed instructions in its proper use when you are trained.



The following rooms are designated as mandatory hearing protection zones and require both staff and students to wear ear defenders or ear plugs:

Sheaf 4L04 Fettleling area

Sheaf 4L05 Wood Machining shop (Restricted Access)

Sheaf 4L08 Extracted Wood Machining

Sheaf 4L17 CNC Routing

Disposable ear-plug dispensers are located outside these rooms and also on the walls of the workshops.

Good housekeeping

Workshops are accessed by many students across a wide range of courses. Good housekeeping is an essential element of workshop practice and you are asked to clear and brush down your workbench after use for the next worker. Please place any scrap pieces or waste items in the bins provided and return any tools or other materials to the store.

It is essential that the bench work-surfaces are not used to store 'work in progress'. These items can be stored under the workbenches or ask technical staff for advice.



Labelling your work

It is essential that you keep your work labelled at all times using the designated labels. At the end of each working day technical staff clear the workshops in readiness for the next day and any un-labelled items may be removed, recycled or disposed of as appropriate.



Storage of student work at year end

Please note that we are unable to store student work after the end of each academic session. Studios and workshops are cleared for the setting up of the Degree Shows and again at the end of Semester 2 in readiness for the next academic session.

It is your responsibility to remove your work from studio and workshop areas before the clearance deadline otherwise you risk losing it.

If you are unable to remove your work before the clearance deadline you must make arrangements with the appropriate technical Team Leader to store your work until you are able to collect it. Also, you should ensure it is clearly labelled using one of the designated laminated labels.

The clearance deadline for the 2017/18 session is Friday 22nd June 2018 (Week 48)



Equipment and facilities available - Sheaf, Level L

Room	Room Name	Description
4L02	Equipment & Materials Centre	Hand tools and equipment loan service, and consumables & materials sales point. H&S information and advice
4L03	Casting & Fabrication	Casting of aluminium, bronze and small scale vacuum casting, and associated mould and pattern making techniques. Fabrication processes of sheet rolling / bending, metal cutting / grinding, and joining techniques such as brazing and welding (Spot, MIG, TIG and MMA)
4L04	Fettling	Extracted bench for the finishing of rough castings using air fed power tools This room also houses pedestal mounted liners and polishing motors
4L05	Wood Machining (restricted access)	Large scale timber and sheet material processing using circular saws, cross cut saw and planer / thicknesser. Wood machining processes such as routing and spindle moulding
4L06	Technical Support	Team Leader - Creative Arts Team
4L07	Framing	Picture frame manufacturing, mount board cutting and canvas stretching
4L08	Extracted Machining	Bandsaws, disc sanders, wood lathes, an inverted router, and a bobbin sander, all connected to a central extraction system. Extracted draught benches for sanding and routing on, and there is a milling machine connected to the extraction for the machining of wood, MDF, etc.
4L10	Spray Booth	Four gun, extracted spray booth with one gun dedicated to applying primer. There are specialist sealers and primers available, and a full colour paint mixing system giving millions of finishing options.

Equipment and facilities available - Sheaf, Level L

Room	Room Name	Description
4L16	CNC Manufacturing & Prototyping	Several laser cutters with different bed sizes for cutting and engraving a wide variety of materials, as well as a vinyl sheet cutter. FDM rapid prototyping and colour 3D printing machines.
4L17	CNC Routing	3 CNC routers (max bed size of 2440mm x 1220mm) for machining wood based products and modelling foam
4L18	Projects Assembly	A space dedicated to bench work, furniture builds and large scale project assembly
4L19	Technical Support	Technical information & support point
4L26	CNC Machine Tools	CNC machining centres (up to 3+2 axis), milling machines and a CNC lathe for accurate and repeatable production of metal components
4L27	Manufacturing Workshop	Large engineering facility with traditional lathes, milling machines, surface grinders, pillar drills and work benches
4L28	Central Open Access Workshop	Construction work space - benches for hand tools and general assembly, bandsaw for metals, pillar drill, tube benders and power rollers. Model making work space, benches for hand tools and general assembly, bandsaw, sander and polishing buffer for plastics, pillar drill, veneer press and steam bender.

Equipment and facilities available - Sheaf, Level 0

Room	Room Name	Descriptionn
4001	Automotive Engineering	Engine assembly and testing
4004	Polymer Testing & Processing	Vacuum formers and ovens for forming sheet styrene and acrylic, silicone and resin vacuum casting and mechanical testing (destructive & non- destructive)
4014	Chemical Engineering	Chemical engineering laboratory/Industrial environment including process principles, Thermodynamics, separation processes, distillation etc.
4016	Chemical Processes	Well equipped chemistry laboratory with fume cupboard
4019	Flight Simulator	Dedicated space for Flight simulation
4023	Technical Support	Technical information and advice point
4024	Electronics Projects	Circuit board design and manufacture
4025	Additive Manufacturing	3D metal sintering machine
4027	Metrology	2D and 3D measuring systems and surface analysis equipment
4028	Mechanics	Lab equipment to demonstrate mechanical engineering principles: stress, strain, friction, heat exchange, torsion, beam deflection, drag and shear force
4029	Power & Transmissions	Electric power equipment and hydraulic rig experimentation
4030	Robotics & Automation	Robotics projects and classwork, PCB design software

Equipment and facilities available - SIA Building, Level -1

Room	Room Name	Description
16.-1.01	J&M Workshop	Specialist metal working / forming equipment such as spinning lathe, collet lathe, fly press, soldering and various sanders, finishers and grinders
16.-1.05	Rapid Prototyping	FDM Rapid Prototyping and multi material rapid prototyping
16.-1.06	Laser Cutting	Several laser cutters with different bed sizes for cutting and engraving a wide variety of materials.
16.-1.08	Main Workshop	Model making work space, benches for hand tools and general assembly, bandsaw, sanders, pillar drill, vacuum former
16.-1.09	CNC Routing	2 CNC routers (max bed size of 1220mm x 1220mm) for machining wood based products and modelling foam
16.-1.15	Materials Store	Hand tools and equipment loan service, and consumables & materials sales point. H&S information and advice
16.-1.16	Technical Base room	Technical information & support point
16.-1.17	Ceramics	Dedicated facility for ceramics processes, Wheels, kilns, damp cupboard.
16.-1.18	Hammer Room	Stakes, heads, swage blocks, mandrels and a full range of forming hammers for blocking, raising, forging and planishing sheet metal

ACES Technical Resource Centres

Creative Media Centre



Creative Media Centre

The Creative Media Centre comprises the following areas:

Harmer Building, Level 3

Creative Media Support Desk
Photographic Darkrooms and Studios
Video, Sound and Animation edit suites

Cantor Building, Level 2

Cantor Media Support Desk
Journalism News rooms, TV and radio studio facilities

Workstation Studios, Paternoster Row

Workstation 101: Film Studio with green screen
Workstation 102: Setbuild & Motion Capture Studio
ProTools HD Sound Studio with Sound Booth

The facilities within the centre are available to all ACES students subject to availability and inductions.

You can find further information about the Creative Media Centre along with tutorials and links on the Creative Media Blackboard website at

<http://shuspace.shu.ac.uk/webapps/portal/frameset.jsp>

If the Creative Media Centre does not appear as a link under Organisation sites on the homepage of your Shuspace please talk to your Course Administrator.

Creative Media Centre Staff



John Blythe

Team Leader

Film, Media & Sound Equipment,
Studio & Software Support



Tom Roddis

Technical Support

Film, Journalism & Media Equipment,
Studio & Software Support



David Turner

Technical Support

Connect 2, Sound & Media Equipment,
Studio & Software Support



Lynne Barraclough

Equipment Loans

Film, Photography & Media
Equipment Support



John Hartley

Technical Support

Photography and Media Equipment,
Studio & Software Support



Jon Chapman

Equipment Loans

Film, Media and Sound
Equipment & Software Support



Nigel Hayes

Equipment Loans

Photography & Media Equipment,
Studio & Software Support



Laura McLaughlin

Technical Support

Photography & Media Equipment
Studio & Software Support



Andy Ayers

Technical Support

Film & Media Equipment,
Studio & Software Support



Mark Pashley

Technical Support

Film, Journalism & Media Equipment,
Studio & Software Support

Creative Media Centre

Opening times

Semester 1

OPEN Weeks 10 to 21 (25 September to 15 December 2017)
CLOSED Weeks 22 and 23 (18 December 2017 to 1 January 2018)

Semester 2

OPEN Weeks 24 to 35 (2 January to 23 March 2018)
CLOSED Weeks 36 and 37 (26 March to 6 April 2018)
OPEN Weeks 38 to 45 (9 April to 1 June 2018)

Creative Media Support Desk Equipment bookings and collection	Monday to Thursday Friday	9am-5pm 9am-4.30pm
Photographic Darkrooms & Studios	Monday to Thursday Friday	9am-5pm 9am-4.30pm
Apple, Animation & PC IT labs Video/Sound Edit Suites	Monday to Thursday Friday	8.30am-Midnight 8.30am-9.00pm
Workstation Studios	Monday to Friday Weekend	8.30am-9pm 10am-4pm
Cantor TV & Radio Studio	Monday to Friday	8.30am-8.30pm

Creative Media Centre - Harmer Building, Level 3



Creative Media Centre - Cantor Building



Creative Media Support Desk Harmer Room 2308, Tel. 0114 225 2659

Cantor Room 9213, Tel. 0114 225 6856

The Creative Media Support Desk coordinates the booking, issue and return of film, video, photographic and media equipment for ACES students. The Technical Staff based here also provide local specialist support to the media and studio facilities associated with the Creative Media Centre.

Before being able to loan equipment from the Creative Media Support Desk students undertaking media related activities are expected to have attended a basic health and safety induction and to have undertaken the registration and introductory training process for the Faculty's risk assessment process.

In most cases non off site bookings do not require a risk assessment but students must have undergone the health and safety workshop to book out equipment.

Training Workshops in the use of specialist equipment such as HD Cameras, Pro SLRs, Studio lights etc. are held at regular intervals. Students wishing to loan specialist items will need to attend these workshops before being able to access the equipment.

If you need to attend, have missed a workshop, or feel that you would like to learn how to use a piece of equipment then please talk to your tutor or staff at the Creative Media Support Desk and they should be able to make these arrangements for you.

If you have not had any training in the use of specialist equipment the Creative Media Support Desk may refuse certain loan requests, offer an alternative item or be able to demonstrate the use of equipment, so please ask.

Photographic Darkrooms and Studios

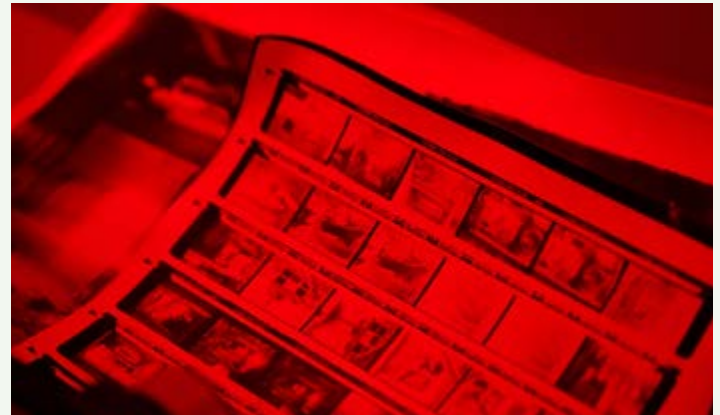
Harmer Building, 2313, 2318, 2306A, 2306B

Monday to Thursday 9am-5pm
Friday 9am-4.30pm
(Extended up to 8.30pm provided a member of staff is present)

All students wanting to work in the darkroom must have had an induction and wear the correct PPE: Goggles, gloves and lab coat. Our darkrooms can be used to manually process photographs. Colour and black and white processing machines are also available.

Before being able to access the facilities in the Photographic Studios all students must have had an induction on studio usage. Each studio comprises of a backdrop roll, flash lighting grid, filters, Apple MacPro and everything you'd expect to find in a professional student environment.

We have a dedicated digital darkroom alongside the studios that cater for all kinds of digital photography and print editing.



Workstation 101, Workstation 102 and Workstation Protocols Studios

The Workstation, Paternoster Row. See City Campus map, page 6

Opening times 8.30am-8.30pm Monday to Friday
 10am-4pm Saturday & Sunday

The Workstation Studios are used for a variety of activities including production shoots, greenscreen, motion capture and teaching. The studios are an off-site medium to high risk area where students are unable to work unsupervised unless they have undergone the relevant health and safety training and completed a risk assessment.

Workstation 101 is primarily for greenscreen and film production work, Workstation 102 is used for set design and build and motion capture. The studio is an off-site medium to high risk area where students are unable to work unsupervised unless they have undergone the relevant health and safety training and completed a risk assessment.

Access to the workstation protocols studio is via the workstation 101 entrance. This has a Protocols HD system, Protocols C-24 desk, and a large sound booth used for both mixing and recording sound and music.

Bookings are subject to submission of an approved risk assessment, see **Risk Assessment of photography and film and media production shoots, page 51.**

Cantor TV Studio

Cantor Building, Room 9206

Opening times 8.30am-5.30pm Monday to Friday.

Students are required to undertake the appropriate induction to access the TV facilities outside of teaching or newsdays.

We have a TV studio comprising of a Tricaster 455 with a two camera setup complete with two autocues, lighting and a separate control room. The control room houses the vision mixer, video and sound facilities. The TV Studio output can be broadcast to both of the newsrooms in Cantor or streamed online.

Cantor Radio Studio

Cantor Building 9207 & 9208

Students are required to undertake the appropriate induction to access the Radio facilities outside of teaching or newsdays.

The radio studio consists of two separate rooms. The main studio contains an Axia Digital mixer, Myriad Radio payout, phonebox and automation system.

The small studio contains a Myriad Radio Payout system with a small mixing desk

Radio studio output can also be broadcast to both newsrooms in Cantor or streamed online.

Apple & PC IT labs Creative Media Centre, Harmer Level 3

Normal Opening Times

Mon - Thurs 8.30am-12pm Friday 8.30am-9pm

Video and Sound Edit Suites	Harmer 2301, 2341, 2327, 2328, 2331, 2332, 2333, 2334, 2520 (Apple Mac)
Animation Suites	Harmer 2324 & 2325
Protools HD Studio	Harmer 2331 & Workstation Studio 101 (Apple Mac)
Journalism	Cantor 9203,9205 & 9206
Photography	Harmer 2310 (Apple Mac)
Games Design/Computing	Cantor 9139, 9141, 9224, 9200 & Harmer 2507

Important Note: As captured video footage requires large amounts of space we recommend **purchasing your own hard drive** to avoid relying on available space left on the computers.

Equipment and room booking information

Equipment loans

ACES Students can pre-book equipment up to one week in advance using the Creative Media Centre Online Booking system. This can be accessed via the following web address.

Harmer and Cantor Media Stores <https://connect2.hallam.shu.ac.uk/connect2/>

If you need further information on Connect 2 please visit the Creative Media Blackboard site and click on the connect 2 option.

The loan period for all equipment is 4 days as standard.

All equipment bookings are subject to availability.

Collecting equipment

When collecting any item of equipment from the Creative Media Support Desk:

- You need to have made a booking using the Connect 2 booking system prior to coming to the Creative Media Centre.
- You will need to present your Student ID card when collecting any equipment.
- You should have completed a Risk Assessment if required.
(see, Risk Assessment of photography and film & media production shoots, page 51)

Please note: If you do not collect your equipment within 30 minutes of the collection time your equipment booking will be cancelled.

Equipment loans

Collecting equipment continued

It is your responsibility to check through each item of equipment once you have booked it out. This is to make sure that there are no missing accessories/batteries etc. that you could be held responsible for when you are returning equipment.

You should always check that the equipment is in full working order before you take the equipment away otherwise you will be held responsible for any loss/damage.

Care of equipment

Please ensure that you look after the equipment whilst it is in your possession. The equipment should be returned in the same condition as it left the Creative Media Support Desk. This includes wrapping up leads and cleaning any dirty cases, bags or the equipment itself to a reasonable standard.

It is the borrowers responsibility to ensure that they have all the items they need and that they are in good working order.

- You are liable for any loss or damage to the equipment whilst it is on loan
- You should not leave equipment unattended
- Cost of repairs or equipment replacement will be charged to you

Equipment loans

Returns, late items and extensions

- Equipment should be returned on or before the time specified on your Creative Media Centre booking.
- All equipment should be packed away properly ensuring all cables are neatly coiled etc. and should be returned by the person who booked out the equipment.
- If you have booked out equipment, you are responsible for that equipment until it is returned.

Please note: The Creative Media Stores cannot accept incomplete equipment returns, so please ensure equipment is complete before checking it back in.

- If you cannot return equipment on time then you must inform the Creative Media Support Desk as soon as possible.
- If you do not return items on time or do not take care of equipment whilst it is in your possession then your tutor will be informed and future bookings may be restricted.
- If an item of equipment has been damaged or stolen whilst on loan please inform the Creative Media Support Desk as soon as possible. You should obtain a crime report number from the police for any theft or criminal damage.
- If a piece of equipment has developed a fault or has simply stopped working please report the fault to a member of the technical team when you return the equipment.

Equipment loans

Fines for late returns

Any late equipment returns will face an automatic fine of £5 and then £5 per day thereafter. Your Connect 2 account will also be suspended until the late booking has been resolved.

Fines can be paid via your SHUcard. If a student chooses not to pay the fine they will be suspended from borrowing equipment until the fine is paid.

Booking equipment and facilities during holidays

The Creative Media Support Desk is unavailable for general equipment bookings over the holiday periods.

Summer: All equipment must be returned before the summer break. Equipment can only be booked out for Referral/Deferral or University Project work over the summer holidays. This needs to be agreed with your tutor and The Creative Media Support Desk in advance.

Christmas & Easter: All equipment should be returned before the Christmas and Easter Breaks.

If you do need equipment for a university based project during this time then please discuss this with any member of the Creative Media Team at least two weeks in advance of the end of term.

Room bookings

All room bookings for your course taught sessions are timetabled. However, if you need to book a small edit suite, photography enlarger or a room for project based work or Self Directed Learning then you can do this via the Connect 2 Booking system.

Students are strongly advised to book specialist rooms or facilities in advance although you can book on the day.

Please note that teaching will always take priority but generally will be booked in advance of the start of term.

If you have booked a room and do not turn up within 30 minutes of the start time, then your booking will be cancelled should someone else require it.

Room bookings over the holidays

Christmas The edit suites will be shut during the Christmas period for maintenance

Please check with the Technical Staff at the Creative Media Support Desk for availability and Christmas shutdown times.

Easter and Summer A small number of edit suites will be open throughout the Easter and Summer holidays. If you need specialist facilities such as the Photography Darkroom then please request this via your tutor (who will talk to the Creative Media Technical Team to see if the booking is possible). Priority will be given to Referral students during the Summer vacation.

Photography, Journalism, Film & Media Risk Assessments

It is a requirement that all large scale productions and any off-site photographic or film and media shoots are risk assessed.

Risk Assessment System

All students wishing to borrow equipment from the Creative Media Support Desk should have had a basic H&S induction and should show a full understanding of the risk assessment process.

Further information can be found in the Health & Safety section of the Creative Media Centre Organisation site on Blackboard. You can also find general and media specific health & safety information as well as a variety of other information about the services and facilities available in the creative media centre on the Creative Media Centre Blackboard site.

Software

The Creative Media team support the following specialist software:

Adobe CC Master Collection	Avid Media Composer	Protools	Logic X
Tricaster	AutoScript Autocue	Myriad Radio Studio Software	Davinci Resolve

Please refer to the full list of software titles available within all our IT laboratories:

<http://www3.shu.ac.uk/SoftwareList/>

ACES Technical Resource Centres

Fashion Centre



Fashion Centre

SIA, Level 3

The Fashion Centre has a fully equipped workshop, a design studio, and a fashion store. We have some of the most up to date equipment for designing and producing garments.

We have a wide variety of industrial equipment, sewing machines, a digital embroidery machine, a computerised cutting bed, a digital fabric printer, a sublimation printer and an Assyst CAD plotter/pattern cutter.

Technical staff are based in the Fashion Resource Centre, level 3 SIA Building (0114 225 2618) basic haberdashery and fashion related items can be purchased from here.

All students must attend an induction course and complete a competency test before using any equipment. The workshops are heavily timetabled for either class teaching or self study, and equipment is in great demand. Students from other courses must make prior arrangements with the technical staff before using the equipment in the studios. Please note timetabled class teaching always takes priority.

Fashion Technical Staff



Bev Stout

Team Leader

Fashion and Printmaking



Ali Shankland

Fashion Technician



Lisa Batty

Senior Fashion Technician



Andrew Bannister-Bailey

Fashion Technician

Opening times

Monday to Thursday 9am-5pm

Friday 9am-4.30pm

Semester 1

OPEN Weeks 10 to 21
(25 September to 15 December 2017)

CLOSED Weeks 22 and 23
(18 December 2017 to 1 January 2018)

Semester 2

OPEN Weeks 24 to 35
(2 January to 23 March 2018)

CLOSED Weeks 36 and 37
(26 March to 6 April 2018)

OPEN Weeks 38 to 45
(9 April to 1 June 2018)



Workshop Equipment

Computerised lockstitch machines

A bobbin case and bobbins need to be purchased to use this equipment, and are available from the Fashion store.

Computerised zigzag machine

Overlockers

Coverstitchers

Buttonholer

This can only be used by trained staff.

Heavy duty walking foot machine

Blind stitch hemmer

Twinstitch machine

Industrial iron presses with vacuum boards

Flatbed and rotary fusing heat presses

Computerised 6 thread embroidery machinery with Wilcom software

Specialist threads are used and must be purchased from the department.

Assyst Computerised plotter, pattern cutter and grader

Zund digital CAD/CAM precision fabric cutter

Dye Sublimation Printer

Fabric/Textile Printer

ACES Technical Resource Centres

Printmaking Centre



Printmaking Centre

SIA Building, Courtyard

Located within the SIA building, the Printmaking Workshop is where ACES students acquire and develop their skills in a range of traditional and contemporary printmaking and typography practices.

Opening times

Monday to Thursday 9am-5pm, Friday 9am-4.30pm

Semester 1

OPEN Weeks 10 to 21 (25 September to 15 December 2017)

CLOSED Weeks 22 and 23 (18 December 2017 to 1 January 2018)

Semester 2

OPEN Weeks 24 to 35 (2 January to 23 March 2018)

CLOSED Weeks 36 and 37 (26 March to 6 April 2018)

OPEN Weeks 38 to 45 (9 April to 1 June 2018)

Printmaking Technical Staff



Bev Stout

Team Leader

Fashion and Printmaking



Mike MacGabhann

Printmaking

Workshop inductions

Inductions are important points of initial contact with the area and the support staff. Inductions provide important information on health and safety and to give students the necessary skills and knowledge to work independently in the studio. Information is also available in notices in each working area.

Workshop Inductions are tailored for specific courses and all information regarding the workshops for your course can be obtained from the course tutor. The printmaking workshop timetable is on display on the notice board outside the workshop.

Health and safety

Students are expected to follow the advice given by staff and on notices.

Personal protective clothing and equipment is readily available throughout the studio, please follow the health and safety instructions in your inductions and use it.

Processes

The processes supported are:

- **Silk screen printing**
- **Etching**
- **Block/Lino**
- **Cyanotype** (an early photo graphic process)
- **Bookmaking**
- **Letterpress**

The printmaking workshop is divided into process lead areas which are:

Screen print area

This area has a comprehensive range of screen equipment and facilities enabling students to experience a full range of silk screening techniques which can be used on a range of materials, from paper, fabric to acetate and MDF.

It is a versatile and popular area so advance planning and booking is recommended

All screen inks used in the area are water-based and solvent free.

Resources include:

- **four screen beds**
- **large exposure unit**
- **back lit wash-out and development area**
- **in house photo positive facilities**

Intaglio and relief area

We have all the facilities on hand to give students a broad experience of traditional printmaking techniques with none of the health risks normally associated with these processes. We offer support in Dry-point and Etching as well as Photo Etching, Relief and Linocut. Lino, aluminium and copper are for sale in the workshop paper store.

- **large etching press (max plate size- 1060 X 715 mm)***
- **medium etching press (max plate size – 770 X 935 mm)***
- **medium relief press (max plate size – 565 X 820 mm)***
- **small relief press (max plate size -285 X 410 mm)***
- **horizontal etching tank (for copper only/max plate size – 300 X 600 mm)**
- **small exposing unit for photo-etching**

* These are the absolute maximum plates and paper sizes for each press bed

Letterpress area

This area includes a Vandercook printing press; cases of select fonts and smaller support equipment. The printing press can accommodate work up to A3 size (297 X 420 mm)

Students are able to book time on this press after an induction

Digital area

We provide a small digital suite within the Printmaking workshop enabling students to make their own positives and negatives for processes in the area such as Silk Screen, Photo-Etching and Cyanotype.

The digital suite and large format printer enable us to output a variety of different types of photographic and digital positives in house. This creates an immediate bridge between digital and traditional processes and enables students to design and make print works to a high standard all within one location.

Resources include:

Three Apple iMac computers with Adobe Photoshop, Illustrator and InDesign (CS6)

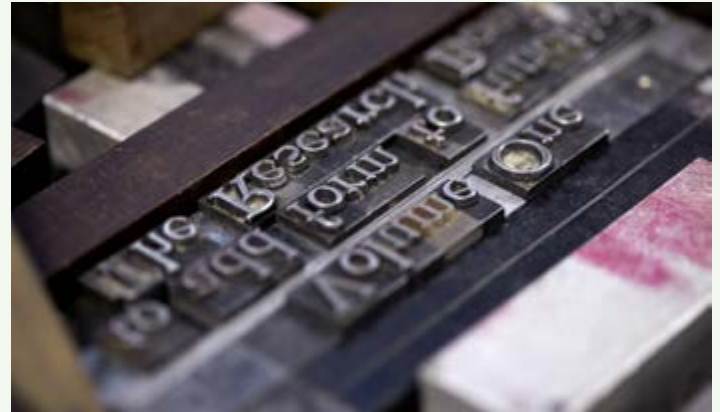
A4 scanner

Large format A0 inkjet printer for film output

A3 b/w laser printer

Please note: we cannot work with files from CorelDraw, Word, PowerPoint or Publisher documents, these should be saved as PDF files first.

Printmaking Centre



Teaching space

This part of the studio is where taught sessions and inductions are given throughout the academic year. However when classes are not in session the teaching space is an area for students to read, draw and work on print projects or have small informal meetings with staff or other students.

The workshop timetable listing the details of the various workshops happening in the area is posted on the notice board outside the main entrance to the printmaking workshop.

Paper store

A good range of different papers are on sale for students as well as materials and equipment for the various printmaking processes carried out in the workshop. A comprehensive list of materials and associated costs are available on the Blackboard website. All sales and transactions are made via your SHU Card account.

Bookbinding materials

The printmaking area has some basic materials and equipment for the making and binding of books.

Safe light prep area

This is where most photographic based prep work for photo-etching and Cyanotype is carried out. It also doubles as our screen store.

The studio community - guidelines

The printmaking workshop is a communal area that supports a number of courses. It provides an opportunity and space for students to meet, work and share creative knowledge.

We want your time in printmaking to be a positive and enjoyable experience by respecting each others work, workspace and adhering to good working practices as outlined in the guidelines below.

- Please ensure that you use equipment in the appropriate manner and for its designated function. Equipment needs to be left in good condition for the next user. Please follow instructions given during inductions.
- For students to get the most from the area, the studio must be kept clean and well maintained. Please clean your working area when you have finished your session..
- Collect your work as soon as possible from the drying racks, we cannot store work beyond its drying time.
- The health and safety of all users of the studio is a priority... It is essential that you follow the health and safety instructions given in your inductions. Please read and adhere to the instruction notices in each area.
- No outside equipment or materials can be used in the studio without prior consultation and permission from technical staff.
- Students need to have received an induction before independently using specialist equipment.
- Inform technical staff immediately if equipment is broken or not working properly.

ACES Technical Resource Centres

Digital Design Centre



Digital Design Centre

The Digital Design Centre comprises the following areas:

Art and Design

Sheffield Institute of Arts, Level -1, Room 16.-1.14

Support Desk and Equipment Store

Print Output Areas

Photo Studio

Computer-aided Engineering

Sheaf Building, Level 2, Room 4214

Support Desk

CAE and MCAD IT Labs

The facilities within both areas are available to all ACES students.

Digital Design Centre Staff



Alan Rutherford

Team Leader
Digital Design Centre



Steven Brandon

CAD, CFD and FEA
in Engineering



Andy Buckley

Graphic Design and
Digital Print



Steve Worsley

Digital Print and
CAD in Engineering

Art and Design Support Desk

Sheffield Institute of Arts, Level -1, 16.-1.14

Tel: 0114 225 4241

Opening Times

Monday - Friday 9.00am - 12.30am
 1.30pm - 4.30pm

The support desk coordinates the booking, issue and return of photographic and media equipment available in the SIA building. Work submitted for printing via the SHU ZendTo / ACESPrint service can also be collected here during the usual opening times.

The Digital Design Centre staff are available to support and advise on a number of specialist resources based in the building. These include Fabric Printing, a Chromafoil system, Zund Digital CAD/CAM Precision Cutter, Programmable Electric Guillotine, Electric Paper Drill, Thermal Binder and Badge Making equipment.

We can also give assistance and advice on using the wide range of Adobe design software available in the SIA Building.



Print Output - SIA Building 16.-1.14

The Digital Design Centre incorporates a high digital printing facility, printing sizes between A3 and A0 and wide format banners.

We print onto on a range of professional photo and matte papers. Please see our technical staff if you wish to print to special media (such as fine art papers, adhesives, canvas etc) or to use your own paper.

Files for printing should be submitted online via the SHU Dropbox - go to zendto.shu.ac.uk and use acesprint@shu.ac.uk as the recipient. Completed prints can be collected from the SIA Support Desk during usual opening hours, payment is by SHUCard only .

Work should be submitted as PDF or other image format such as TIFF or JPG. We ask that you use the following naming convention when saving files for print: **Student Name, Output Size and Media Type** (for example **AlanSmithee_A2_Matte**) The technical staff can advise on the best way to prepare and save documents for printing.

Self-Service Printing - SIA level -1, 16.-1.07

Wide format OCE printer, directly accessible to students from any of the iMacs in the area. This provides quick, inexpensive printing of posters, CAD plans and presentation material up to A0 in size onto 90gsm uncoated paper. Payment is taken from your Papercut (SHU printing) account.

Please Note: These facilities are extremely popular around show/assessment times. You are advised to plan your printing needs in advance to avoid delays at peak times.

Alternatively you can use the services of the University Print Services, Level 1, Adsetts Centre
www.theprintshop@shu.ac.uk Tel: 0114 225 4763

Photo Studio - SIA 16.-1.20

Composing a static lighting grid, backdrop rolls and infinity table, before being able to access the facilities students must have had attended an induction

Booking for the room and any associated equipment should be made through the Connect2 system.

Please note that additional photographic facilities are available in the Creative Media Centre (Harmer level 3) if required.

SIA Media Store - 16.-1.14

The support desk has a number of digital SLR cameras and related equipment available for ACES students. These should be booked in advance through the Connect2 system:

<https://connect2.hallam.shu.ac.uk/connect2ddrc>

For more information on equipment and studio booking procedures please see **Equipment and Room Booking, page 45**



Computer-aided Engineering Support Desk

Sheaf Building, Level 2, Room 4214

Tel: 0114 225 3885

The technical staff based in 4214 can give assistance and advice on using a wide range of software including:

- Computer Aided Design
- Computer Aided Manufacture
- Finite Element Analysis
- Computational Fluid Dynamics

The Digital Design Centre IT laboratories are open to students during normal Sheaf Building opening times:

Monday to Thursday 8.30am-Midnight Friday 8.30am-9.00pm Saturday and Sunday 10.00am-5.00pm

During Monday to Friday all IT laboratories within the Digital Design Centre have scheduled times for class teaching. These sessions take priority but the laboratories are available for student drop-in outside of the timetabled classes (see notices outside the laboratories for details and times of classes that week).

Please Note: During student vacations certain laboratories may not be available due to upgrading and scheduled maintenance.

Sheaf 4223 and 4222 Have 27 PCs and 16 PCs respectively supporting general design applications.

Sheaf 4220 and 4221 Both rooms have 30 PCs supporting CAD, 2D and 3D engineering applications.

Sheaf 4226 and 4227 SCALE-UP Collaborative learning studios

Important note: The user accounts in the Digital Design Centre IT laboratories get automatically deleted at the beginning of every month, so you'll need to back up your work! We recommend **purchasing your own hard drive** to avoid relying on available space left on the computers and the loss of any work.

ACES Technical Resource Centres

Electronics and Communications Centre



The Electronics and Communications Centre

The Electronics and Communications Centre (ECC) is located on Level 3 of the Sheaf building and Level 3 of the Cantor building. The centre supports courses in electrical and electronic engineering, digital communications, computer networks applications and Design Technology Education (DTE).

Our technical staff are able to provide advice and assistance in the ordering of electronic components, production of printed circuit boards, the use of various specialist software packages and the instrumentation and network equipment found in the laboratories.

The Cantor based ECC support team (Cantor 9316), Tel: 0114 225 6822/5534 support the following laboratories:

9303	Networks 1 laboratory	9343	General computing laboratory*
9305	Networks 2 laboratory		
9306	Networks 3 laboratory		
9306	Networks 4 laboratory		

The Sheaf based ECC support team (Sheaf 4305), Tel: 0114 225 6823/6822/6821/3447 support the following laboratories:

4307	Electronics laboratory	4309	Communications laboratory
4301	ECAD laboratory	4302	Embedded laboratory
4304	Networks laboratory	4029	Power and transmissions laboratory
4024	Design Technologies laboratory	4030	Automation and Robotics laboratory*

Meet the staff



Misko Abramuik
ECC Team Leader



Mark Wessler
Electronics Support



Rob Greaves
Network Support



Ken Duty
Electronics Support



Adrian Jeffries
Technology Support



Richard Johnson
Network Support

ECC - Specialist IT laboratories

Cantor Building, Rooms 9303, 9305, 9306, 9307, 9343

Sheaf Building, Rooms 4301, 4302

During Monday to Friday all Laboratories have scheduled times for class teaching. Timetables are displayed outside each room. These scheduled classes take priority but the laboratories are available for general use when free. The ECC specialist IT laboratories are open to students during normal Cantor opening times: Monday to Friday 8.30am-Midnight Saturday and Sunday 10am-5pm

Electronics and Communications laboratories

Sheaf Building, Room 4307, 4309, 4024, 4029, and 4030

During Monday to Friday all laboratories have scheduled times for class teaching. Timetables are displayed outside each room. Scheduled laboratory classes must take priority but the laboratories are available for project work when free and after a project risk assessment* has been completed and approved.

* for DTE students in Sheaf 4024 attendance at all safety briefings is required rather than written risk assessments

The ECC specialist hardware laboratories are open to students during normal Cantor opening times:

Monday to Thursday 9am-5pm Friday 9am-4pm

Students are welcome to use the Electronics laboratory, 4307 and the Communications laboratory, 4309 outside of timetabled classes to catch up on or complete taught class work. Please liaise with the Sheaf building ECC technical staff to access the laboratories.

Please note: During student vacations certain laboratories may not be available due to computer re-imaging.

Loan of equipment

Some class based work during your course may require you to loan equipment on a temporary basis. This can be arranged by approaching technical staff in the relevant support centre. Loans are normally on a daily basis and require the handing in of your student card for the duration of the loan.

Electronic component ordering

Electronic components can be obtained from the Sheaf support team. A limited stock is carried in the area and items not available can be ordered. Details of the process and our suppliers are displayed locally outside the Sheaf support centre. Payment for components is via your SHU Card.

Printed circuit board production

Design files should be saved to a USB drive and passed to the ECC support team in the Sheaf building in the form of a Gerber file and a drill file. Boards usually take 2-3 days to be produced. Advice on designs can also be given if they are produced on University supported design software which is currently Orcad layout, Eagle and Circuit wizard.



ACES Technical Resource Centres

Advanced Analytical Techniques



Advanced Analytical Techniques

The Advanced Analytical Techniques team provide specialist support to the Materials and Engineering Research Institute (MERI).

The Technical Team, operating from Norfolk building levels 5 & 6 comprises professional chemists, material scientists & engineers that support the laboratories, equipment and researchers in their daily roles. Support is also available for final year engineering students where access to the specialist facilities is required for projects.

Meet the staff



Stuart Creasey

Team Leader
Electron Microscopy



Tony Bell

XRF/XRD techniques
Mechanics
Materials analysis



Deeba Zahoor

Polymer analysis
Chemical processes
COSHH



Gary Robinson

PVD coating
Precision workshop



Paul Allender

Electron Microscopy
Materials analysis and Testing

Materials and Engineering Research Institute (MERI)

MERI is a multi-disciplinary research institute with a strong regional, national and international reputation. It undertakes contract research and consultancy in materials analysis, forensic engineering, robotics & automation, machine vision, manufacturing and the built environment.

MERI is organised into four primary research centres plus a consultancy unit:

- Centre for Automation and Robotics Research
- Thin Films Research Centre
- Polymers, Nanocomposites and Modelling Research Centre
- Structural Materials and Integrity Research Centre
- Materials Analysis and Research Services Centre for industrial Collaboration (MARS)

Research led teaching ensures that our undergraduate students gain 'hands on' experience and have access to state of the art equipment ranging from the latest electron microscopes to high performance computing.



Digital Technology Services

ACES IT Laboratories



ACES IT Laboratories

Supported by Digital Technology Services

Digital Technology Services (DTS) support a range of IT laboratories and other IT facilities across all campuses. Some of these facilities are specifically equipped for ACES students, many with specialist hardware and software applications supporting your course/programme of study.

Although IT teaching laboratories are heavily timetabled, ACES students may access them for self-directed learning when not being used for formal teaching sessions. The IT teaching laboratory timetables are posted outside each of the individual laboratories and on course Shuspace sites.

In addition to the ACES specialist IT Laboratories there is a range of specialist software, group work and other facilities in EMB Information Works, the Adsetts Learning Centre, EMB 3311, Owen level 3 Edit Suites, and Cantor 9224. Many of the PCs in these locations can be booked including those with specialist ACES software. Details of how to book PCs and group study facilities can be found on Shuspace.

There is also a range of other laboratories across the University which have many of the general software applications installed, please see SHUspace for more details of the room locations and available software.

<http://www3.shu.ac.uk/SoftwareList/>

A list of the software installed in each laboratory is posted outside the IT laboratories and on Shuspace. For the 2017/2018 session all software operates under Windows 7.

The software versions that you will be using are fixed for the start of the academic session and may not be the most recently released version. Please be aware that there may be compatibility issues should the version you are using on your personal laptop/computer be different to the versions installed in university laboratories.

Important note: The user accounts in many of the ACES Specialist IT laboratories get automatically deleted at the beginning of every month, so you'll need to back up your work! We recommend purchasing your own hard drive to avoid relying on available space left on the computers and the loss of any work you have done.

Opening times

Specialist IT Laboratories are open

Monday to Friday 9am-Midnight

Saturday 9am-5pm

Sunday 10am-4pm

The Adsetts Learning Centre and Collegiate Learning Centre are open seven days a week during semesters, with 24 hour access (Sunday–Friday) for most teaching weeks.

IT help for students

DTS offers help, support & guidance with IT in a range of ways

Phone Call 0114 225 3333 for 24/7 help

Email ithelp@shu.ac.uk

Online shuspace.ac.uk
(including instant messaging)



Quick Contacts

Workshops

Sheaf Level L, Room 4L02
SIA Workshops Room 16.-1.15

Creative Media Centre

Creative Media Support Desk
Harmer Level 3 **0114 225 2659**

Cantor Media Support Desk
Cantor Level 2 **0114 225 2856**

Fashion Centre

SIA Level 3 **0114 225 2618**

Printmaking Centre

SIA Courtyard **0114 225 6858**

Digital Design Centre

Art and Design Support Desk
SIA Level -1, 16.-1.14 **0114 225 4241/5150**

CAD/ Engineering Support Desk
SIA Level -1, 16.-1.14 **0114 225 3885/5097**

Electronics and Communications Centre

Cantor EEC Support Team
Cantor Level 3, Room 9316 **0114 225 6822/5534**

Sheaf EEC Support Team
Sheaf Level 3, Room 4305 **0114 225 6823/6822**
0114 225 6821/3447

Advanced Analytical Techniques

Norfolk Levels 5 & 6 **0114 225 3464**

IT Help

Digital Technology Services **0114 225 3333**

Security Control Room

Owen Level 5 **0114 225 2000**

Please let us know how we are doing!

We are continually trying to improve the quality of our resources and services and would welcome your comments and ideas on how we might achieve this.

Please post your comments to: acestechserv@shu.ac.uk

