



The Institute of Science
and Technology

A Guide to the HEaTED Technical Skills Courses

This is an introduction to the HEaTED technical skills courses programme . It contains information on what to consider when setting up a course.

If you are viewing this on screen, you can click on the Bookmarks listed on the Bookmarks tab to navigate round the document. The text in blue (below the numbered title) summarises the content under each title.

INTRODUCTION TO HEATED TSCP	2
(Background to the TSCP and its relationship with the HEaTED project)	
DIFFERENT TYPES OF TRAINING	2
(The relationship between TSM and the TSCP; how this influences course design.)	
HOW THE PROGRAMME WORKS	3
(The implementation process from the planning phase to course completion)	
GUIDELINES FOR SETTING UP A TRAINING COURSE	4
PERMISSION TO RUN COURSES.....	4
(The rationale behind the involvement of senior colleagues during the course planning process)	
DESIGNING AND PLANNING*	5
(Outline planning issues: Content, time management, methods of presentation, presenter preparedness)	
<i>The key planning questions.</i>	6
COSTS*	7
(How to assess course costs)	
HEALTH AND SAFETY	7
(The absolute necessity of assessing H&S potential consequences)	
FEEDBACK.....	8
(How to deal with feedback from participants)	
THE TRAINING CONTRACT	8
(Important terms and conditions governing the TSCP)	
CONTACTS	8
FEEDBACK FROM YOU TO US	8

Introduction to HEaTED TSCP

NB: Throughout this guide the term **TSM** will refer to Higher Education technical staff, allied specialists and technical resource managers, and **TSCP** will refer to the technical skills courses programme.

The TSCP is part of the HEaTED project, which aims to address the widely held perceptions, which were confirmed in the 2006 survey, that for TSM there is:-

1. A serious shortage of training relevant to their duties and responsibilities
2. An ageing workforce with little attention to succession planning
3. A gradual erosion of essential skills and knowledge associated with these issues

Within the TSCP the accent will be on technical and specialist topics. The project team is constantly seeking to expand the course portfolio (please see http://www.istonline.org.uk/TSCP/technical_skills_courses.asp for a full current listing of courses).

The purpose of the programme is to provide, relevant, affordable courses and that these will be made available throughout the UK. One of the benefits of HEaTED membership is that the majority of courses are offered at a discounted rate to members.

A vast range of knowledge and skills already resides within the HE technical community. HEaTED project team aims to utilise this by facilitating and co-ordinating courses that will be run by the technicians themselves in their areas of expertise. Many of the courses listed on the site are currently provided by technicians. There are also courses listed that are provided by commercial enterprises and organised within University Departments.

More information about the HEaTED project and it's other initiatives can be found in the Facilitators Guide to HEaTED Services (http://www.istonline.org.uk/HEATED/HEaTED_Facilitators_Guide_v1.pdf) and on the Institute of Science and Technology's website (<http://www.istonline.org.uk/HEATED/heated.htm>).

Different Types of Training

The HEaTED project aims to cater for all TSM disciplines within Higher Education, This means that the programme will promote a wide variety of assimilated topics. The web listing of the courses has simplified this by splitting up the courses into different subject areas. These will expand in line with the developing programme.

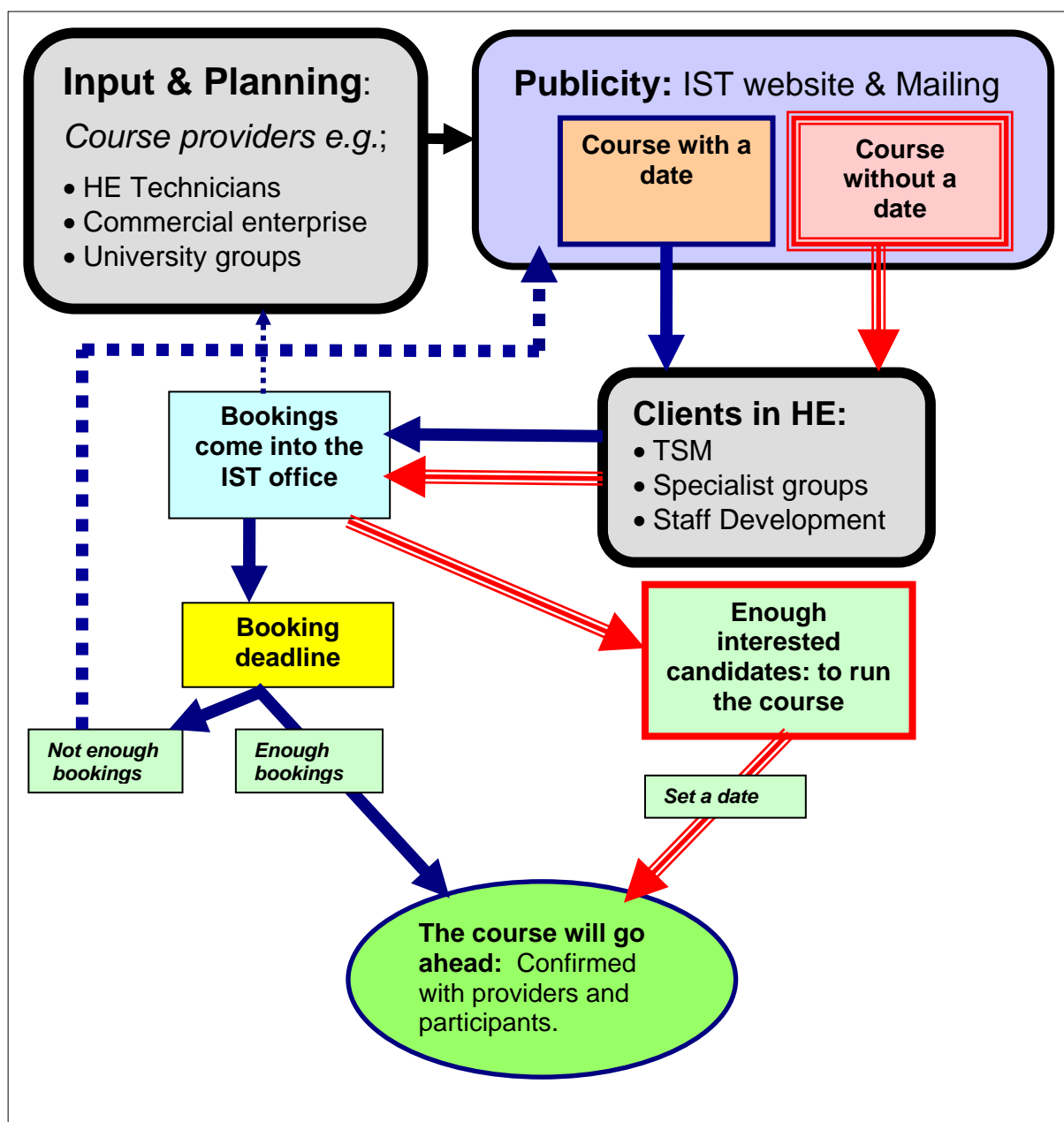
Within their fields of expertise, the TSM community apply what they do at different levels of expertise, depending on their experience, knowledge and working environment. It follows that many different types of training events need to be offered. Each event is tailored to meet the requirements of the course candidates. and can include short courses, workshops, seminars, conferences and specially convened meetings. For example we have seminars providing information about Polymerase Chain Reactions, and hands on workshops about Hand Flat Knitting Machinery. Courses vary also in duration, depending on content, from half day to 5 day events and can be offered, locally, regionally and nationally

How the Programme Works

Course administration is organised through the offices of the Institute of Science and Technology (IST). When all the details have been submitted, courses are advertised. (see guidelines below) and the course is listed on the IST website. It will also be listed in the courses update that is sent electronically to the HEaTED and Superintendents' mailbases every 3 months.

We advertise courses in two ways,

1. **With dates:** These will go ahead unless there are not enough applications to ensure that the course is viable.
2. **Without dates:** In a sense these events are provisional, subject to ascertaining demand. Convenient dates are arranged with the supplier or course leader once sufficient positive candidate interest has been identified.



Notes:

- The trainer raises an invoice to cover tuition and preparation.
- Fees are paid by the IST to the provider.
- Provider is responsible for submitting feedback forms to the IST.

The course planning system from provider to completion is shown schematically in the above flow diagram. Candidates book on the course, by filling in a form, which goes to the IST office. When a date has been agreed we put in place a booking deadline for the course, usually about 1 month in advance of the course. If we don't have enough interested candidates at that point we contact the course provider for advice as to whether to cancel the course. Under some circumstances, the publicity procedure may be used to trawl last minute applications. The IST office liaises with the candidates at all stages.

At least one month before the course date the providers are required to provide the IST office with course programmes, and any pre-course material that needs to be sent to the candidates. The course provider must also supply details of accommodation (if this is included in the price), maps and any other pertinent information at this time.

One week before the course the IST office posts out candidate packs and feedback forms to the course provider.

On the day of the course, the 'trainer' hands out the feedback forms, collecting them at the conclusion. These are returned to the IST office.

The course provider invoices the IST for the fee agreed, for running the course and reasonable expenses. (The IST can accommodate purchase orders if required)).

Guidelines for Setting up a Training Course

This section is intended to provide some guidelines for potential course providers outlining what they should consider when putting a course together

Some of the information below details the prerequisites so as to advertise a course or a workshop (indicated with an asterisk*)

Permission to Run Courses

It is recommended that anyone who intends to run a training event should immediately discuss this with, and gain permission from, their line manager. This will serve the following purposes. It will:

1. help to maintain a good working relationship, and possibly obtain valuable support
2. allow the course initiator time to develop the event
3. provide an opportunity to obtain advice and guidance to help in the course planning process (including cost and safety considerations)
4. enable the providers to undergo further training to enhance their technical training expertise See footnote on page 5.

Permission should be also sought from Heads of Departments (or equivalent), finance officers, enterprise officers and health and safety officers. It is advisable to seek advice from senior managers in all of these areas before embarking on setting up a course.

Designing and Planning*

This is a brief *outline* of issues relevant to planning a technical training event. The preliminary approach regarding the course itself should encompass the following fundamental issues:

- The content:** clearly set aims and objectives; relevance to the needs of the particular audience, the way the material is organised so that it is coherent, matching what is stated in the course title; the course plan vs time available; whether the foundation information such as technical terminology needs to be provided before the event.
- The presentation:** visual, for example how the demonstration can be seen properly, whether it is conducive to learning, how the attention of the audience is to be maintained (eg variation in teaching styles)
- The presenter:** the main points being; preparedness, knowledge of the topic, connection to the audience, dealing with questions, familiarity with the AV equipment

One of the major problems that trainers have to contend with is to fit all that needs to be covered into a limited time span. So, how to use the contact time most effectively should be considered. From the point of view of the course participants, this might require the Trainer to organise the 'course' into three phases:-

1. Pre-course reading and exercises that are designed to pitch the course on a foundation of prior knowledge; also to provide the trainer with useful information.
2. The contact time itself. NB, selecting *what to include in the course itself* involves the selection of priorities.
3. Post course follow-up activities that underpin the learning. It should also fill gaps not covered in the course itself.

Nb Not all technical training events will need the above three phase planning approach.

For a deeper insight in to these issues, HEaTED is offering a Train the Technical Trainer course.¹

1 To help TSM to overcome any reservations they may have (e.g. lack of confidence or experience in presentation skills), HEaTED is offering highly subsidised 'Train the Technical Trainer' courses. The first 3 pilot courses will have been offered free during 2009, but following this a charge will be made to cover running costs of the course. see http://www.istonline.org.uk/TSCP/train_technical_trainer.asp

The key planning questions.

What are the aims of the course?	<i>What information is to be delivered, e.g. practical skills?</i>
What will the delegates learn or be able to do having attended the course?	<i>e.g. know how to TIG weld or understand the principles of Nuclear Magnetic Resonance</i>
Who is the course aimed at?	<i>What the target audience need in terms of prior knowledge.</i>
What are the deciding factors governing content of the course?	<i>What the course leader needs to do to get the essential information across, and how or whether the course programme needs to be developed or modified</i>
What are the teaching and learning methods? (Do you need pre and post course information to be sent to the candidates?)	<i>Eg Seminars, practical hands on, discussion groups, demonstrations, problem based learning, question and answer</i>
Is the proposed course up to date (relevant)?	<i>Using antiquated methods to demonstrate a technical principle or technique may not be credible!</i>
How long should the course be?	<i>It is very important that enough time is given to cover all the essential learning aims of the course, if time is limited pre and post course material is invaluable</i>
Is there a suitable venue?	<i>What sort of room is suitable? Examples: laboratory / workshop space and equipment, computer teaching room, a seminar room or lecture theatre, sufficient space for group work or breakout sessions, suitable seating arrangements – are these available?!!!</i>
What audio visual equipment is available?	<i>Apart from the standard data projection, whiteboard, OHP and flip charts, one of the most useful additions for technical demonstrations is a visualizer see footnote²</i>
Dates for the course?	<i>This can be dictated by personal work load, room availability etc. A date does not have to be supplied from the start See schematic diagram on page 3</i>
What is the maximum number of candidates?	<i>This may be dictated by room space or equipment availability or by what you consider to be the maximum number of people you could effectively train (depending on the style of training)</i>
What is the minimum number of candidates?	<i>This can be tied in with attendance charges for the course (see below), If it is going to cost £5000 to run the course regardless of whether there are 20 or 2 people attending you need to decide what would be a realistic price a candidate (or sponsor) would be willing to pay.</i>
Does more than one person need to be involved in running the course?	<i>If more than one person is required you need to identify a willing qualified person and get permission for them to take part.</i>
Do refreshments need to be provided, and how will I organise this	<i>We recommend regular breaks throughout courses. Sometimes a separate room will need to be found to serve the refreshments</i>

2 A Visualizer is the most flexible presentation tool of our times. It can pick-up any kind of material (books, photos, 3-dimensional objects etc.) quickly and easily and provides a high resolution output signal for video/data projectors, monitors, interactive whiteboards or videoconferencing systems.

Costs*

This is a non-exhaustive list of what providers may need to consider when putting together a course. Charges should be kept affordable.

NB The IST adds an administration charge for running courses.

Do not agree costs without taking advice from relevant the finance officer(s).

<i>Relevant costing factors for calculation of fees.</i>	
Equipment hire	<i>(what equipment will you need?)</i>
Consumables	<i>For example: Chemicals, pipette tips, cleaning materials, stationery</i>
Audio visual	<i>(some institutes charge for the hire of projectors etc.)</i>
Accommodation for candidates where an overnight stay is required	<i>Do you want to include this?</i>
Hand outs/	<i>booklets (including pre and post course information) Photocopying costs!</i>
Refreshments and meals	<i>(It is advisable that candidates are given at least 30 mins for lunch and have regular breaks for refreshments)</i>
Staff time/costs	<i>(How much does it cost the institute to pay supporting staff, as well as the course tutors ?)</i>
Room hire	<i>Some venues charge significantly for rooms and supporting services.</i>
Estates charges	<i>Consult with you finance office</i>
Institutional overhead charges	<i>Consult with you finance office</i>
Personal protective equipment	<i>(overalls, lab coats. Goggles etc)</i>
Total*	
What is the minimum number of candidates you would need to make it viable to run the course	
Cost per candidate (total cost divided by the minimum number of candidates)*	

Health and Safety

What are the Health & Safety considerations (we recommend that course providers consult their H&S officer about course arrangements before committing to run a course)?

Are the necessary risk assessments and COSHH forms in place?	<i>Check with experienced safety officer.</i>
Is a PPE required?	<i>Check with experienced safety officer</i>
Do candidates need to be warned of any potential hazards	<i>e.g. strobe lighting, teratogens</i>
What H&S information is needed to provide to the candidates on the day?	<i>evacuation procedures, fire alarm testing etc</i>

The course provider is responsible for the health and safety of all candidates attending the course/workshop. All course providers must abide by the H&S regulations and local policies of the place where the course/workshop is being held, including risk assessments and COSHH forms. If a particular group of people are likely to be more at risk this must be reflected in the course description (e.g. pregnant candidates).

Feedback

All course providers are supplied with feedback forms to give out to the candidates at the end of the training event. The provider also collects the feedback forms and posts them back to the project administrator. We advise that course leaders take copies for their records.

It is hoped that feedback will be positive. However, this is not always the case. This is not something to be offended by or defensive about. Feedback of this kind can be very constructive in improving courses. For example modification of a course may well be based upon candidates' experience of the event. Feedback might highlight that the course description is not clear enough about what the candidates should expect. Post course handouts can help in this respect.

The Training Contract

All course providers are asked to sign a training contract which details the terms and conditions for offering a course through the IST. This includes payment, health and safety, and course arrangements as described above.

It also covers intellectual property rights which remain the property of the course provider. The use of any materials in the course shall not be taken to imply that they have been transferred to the candidates or any other person. It states that 'no-one shall copy, make available, transmit, reproduce, sell disseminate, license, distribute, publish, broadcast or otherwise circulate the course materials either wholly or in part, without the express written permission of the course provider'.

Contacts

General queries about courses can be dealt with by Wendy Mason (wendymason@istonline.org.uk, 0114 2763197)

Queries about running a course please contact Michelle Jackson (michellejackson@istonline.org.uk, 01248 714965)

Feedback from you to us

The HEaTED project team is keen to receive feedback about our courses, if you have any comments or suggestions please get in touch. We rely on you for your views on how to make this project of inherent value to TSM. Please contact Wendy Mason (wendymason@istonline.org.uk).