

# PRACTICAL SPECIFICATION AND TECHNICAL WRITING

## FOR ENGINEERS AND TECHNICIANS

### BRISBANE

22 & 23 June 2015

### PERTH

25 & 27 June 2015

ONLY **\$1995** per person  
including GST

## EARLY BIRD BOOKING OFFER

**TOTAL VALUE TO YOU - \$790**

Book by 25 May 2015 and  
you will receive **20% OFF** the full  
registration price + **4 eBooks**  
each with hundreds of pages of  
engineering knowledge



- Practical Financial Fundamentals and Project Investment Decision Making
- The Practical Business Engineer
- Leading Your Engineering Team to Top Performance
- Train the Trainer - Presentation and Instructing Skills for Engineers and Technical Professionals

PLUS  
OUR **4-FOR-3**  
BOOKING OFFER

A 2-day practical workshop presented by:

**John Piperides**  
BE Electrical



### Been to an IDC workshop before?

- Attend this workshop and you'll receive **5% OFF** the registration price!

### YOU WILL LEARN HOW TO:

- Systematically design and write accurate and comprehensive technical specifications
- Write realistic specifications, thereby improving project management and performance
- Write clear and concise formal reports, equipment manuals and other technical documentation
- Develop effective communication with technical as well as non-technical staff at all levels (from top management within the organisation to the end user in the home environment)
- Brainstorm and identify technical problems and solutions
- Collect, organise, analyse and evaluate information
- Transfer technical information into powerful graphs, flowcharts and tables
- Translate technical documents into captivating oral presentations

### WHO SHOULD ATTEND:

- Engineering professionals (e.g. project and design engineers)
- Maintenance planning staff
- Maintenance/supervisory managers
- Project team members in: manufacturing, process industries, tendering, contracting, marketing, procurement, feasibility study, research and development, utilities and local authorities
- Technical personnel

# PRACTICAL SPECIFICATION AND TECHNICAL WRITING

## DISCOUNT OFFER

**SAVE \$1995**

**BOOK FOUR DELEGATES  
PAY FOR THREE!**

Register three people on a public two-day workshop and receive your fourth registration **FREE**

\* discounted and free registration to be used for the same workshop in the same venue

## PLUS 5 eBOOKS OF YOUR CHOICE!

Every delegate will also receive **5 eBooks of their choice** from IDC's technical library – valued at **\$420!**

## ABOUT IDC TECHNOLOGIES

With a portfolio of over 300 workshops specialising in the fields of industrial data communications, electrical and mechanical engineering, automation and control, we have trained over 500,000 engineers, technicians and technologists over the last 20 years.

We have an enthusiastic team of professionals in offices conveniently located around the world, who are committed to providing the highest quality of engineering and technical training.

Visit our **WEB SITE**

**www.idc-online.com** to download **FREE** software and technical information

## ON-SITE TRAINING

All IDC Technologies training workshops are available on an on-site basis, presented at the venue of your choice, saving delegates travel time and expenses, thus providing your company with even greater savings.

**SAVE MORE THAN 50% OFF** the per person cost!

2-day courses start from **\$6,000 FOR UP TO 6 PEOPLE** and can be **CUSTOMISED** to your needs.

Have the training delivered **WHEN AND WHERE** you need it!

For more information or a **FREE** detailed proposal contact:

**Kevin Baker** on **1300 138 522** or email: [training@idc-online.com](mailto:training@idc-online.com)

## An intensive, practical 2-day workshop presented by **John Piperides** BE Electrical



John is a professional electrical engineer with over 25 years experience in industrial maintenance, production, management, sales and improvement. He has held management positions in several manufacturing and sales companies. His diverse responsibilities have included contract negotiation, authoring and responsibility of departmental budgets, daily management of over 20 reports, practice of cGMP, auditing in a pharmaceutical plant, and system administration and programming of diverse IT and embedded systems. He has been directly involved with industries including building management, pest control, mining, power utilities, food, pharmaceutical, steel, building products, sugar, paper and pulp, rail and airports.

John has completed many years of further education including developing, writing and delivering many work based courses and seminars. He has spent 10 years as a part time teacher at TAFE in electrical engineering, and 15 years delivering structured courses in thermography, power quality, instrument safety, motor drive theory, PLC, SCADA, and pest inspection.

## THE WORKSHOP

Researching and preparing technical documents, especially technical specifications, calls for much effort and time. This workshop is designed to give you step by step guidance to writing these documents in a professional manner, working within a cost and time framework.

The workshop will demonstrate techniques to establishing more effective communication between technical and non-technical staff and foster skills relating to problem identification and solutions, plus enhancing skills in information seeking, research and organising collected data in a non-conflicting, unambiguous manner.

### Pre-requisites

A fundamental knowledge of basic technical writing of reports is expected and some understanding of what you want to achieve with specification writing.

Specific and concrete	Vague
The machine must run at 95% efficiency.	The machine must run at high performance.
Use a 15 m tall spray dryer.	Use a tall spray dryer.
The boilers and turbines failed.	The plant failed.
Rain and wind are expected.	Unfavourable weather conditions are expected.
Please print 20 copies by Monday, 10:00.	Please print 20 copies as soon as possible.
Please return this by Tuesday afternoon.	Please return this as soon as possible.

## PRACTICAL SESSIONS

This is a practical, hands-on workshop enabling you to work through exercises which reinforce the concepts discussed.

To gain full value from this workshop, please bring your laptop/notebook computer.

*The fee for each workshop covers all materials including workshop manual, lunches and refreshments*

## FREE REFERENCE MANUAL

as a hard-copy and eBook (VALUED AT \$223.90)

Our delegates don't just receive photocopied notes!

You will receive the comprehensive fully illustrated reference manual, as a hard-copy and eBook version, filled with hundreds of pages of tables, charts, figures and handy hints.



# FOR ENGINEERS AND TECHNICIANS

## THE PROGRAM

### DAY ONE

#### INTRODUCTION TO TECHNICAL WRITING

- Fundamentals of technical writing (clear, concise, accurate)

#### FORMATS OF TECHNICAL WRITING

- Formal report, technical memo reports, technical proposals, equipment/maintenance manuals, journal articles

#### TYPES OF TECHNICAL REPORTS

- Periodic, progress, research, recommendation, field, feasibility

#### COMPILING THE REPORT

- Establish a framework
- Terms of reference: subject matter, purpose for writing it, reader of the report

#### STRUCTURE OF A TECHNICAL REPORT

- Main sections: introduction, findings, observations, discussions, conclusion, recommendations, executive summary
- Elements of technical writing: factual versus opinion, logical flow of writing, results of research
- Other sections: title page, table of contents, lists, appendices, references

**Case Study: Developing awareness of fact and opinion and substantiating opinions with facts**

**Practical Session: Determining terms of reference and writing an introduction**

#### DEVELOPMENT PROCESS

- Preparing to write (establish a writing objective)
- Identify readers
- Perform necessary research (including interviewing skills, listening process, note taking, reading process)
- Organising the report
- Methods of development (general to specific, specific to general, chronological, sequential, cause and effect, comparison, spatial)
- Overview of conclusion/recommendations section

**Practical Session: Applying the four stage reading process, group discussion on conclusion and recommendations**

#### REPORT OUTLINE

- Mind mapping
- Outline formats (academic and engineering outline styles)
- Rough draft, revising the report
- Activate the writing (correct grammar, language, expressions and units of measures)
- Simplify the writing (word/sentence/paragraph lengths, fog index)

**Practical Session: Investigating faulty construction methods. Participants to research design faults and problem areas. Make observations/findings, mind map and write a rough draft**

#### FINALISING THE REPORT

- Report appearance: white space, headings/sub-headings, colour, illustrations, graphic material

**Practical Session: Interpreting graphic material, graphic presentation**

#### VERBAL PRESENTATION OF YOUR REPORT

- Preparing your presentation, using the report as guideline
- Formulating the central message
- Arranging the ideas, facts and supportive arguments logically
- Mind mapping technique
- Make a positive impact (appearance, gestures, eye contact, body language, style of speaking)
- Using visual aids effectively (types of visual aid equipment, using the equipment correctly)
- Maximising delivery (fielding questions, managing answers, handling difficult situations, short talk guidelines, impromptu sessions)

**Practical Session: Delivery of a two minute presentation (each delegate delivers a presentation on a particular aspect of the technical report)**

### DAY TWO

#### SPECIFICATION WRITING

- Fundamentals of specification writing
- Preparing the specification (customer, market, risk, product, scope)
- Specification database (basic specification information, organising input from different specialists and sources)

**Practical Session: Brainstorming exercise, creating a specification data input sheet**

#### STRUCTURE OF TECHNICAL SPECIFICATIONS

- Master format (correct numbering and titling)
- Section format
  - Section 1: Administration – definitions, descriptions, quality assurance, warranties
  - Procedures – delivery, storage, handling
  - Maintenance – extra materials required, service
- Section 2: Product information including manufacturer's details, materials, equipment requirements, system requirements
- Section 3: Execution of the specification (preparation, installation, quality control, training)

**Practical Session: Format outline**

#### SPECIFICATIONS AND CONTRACTS

- Securing a contractor
- Contract
- User manual
- Review checklist

#### SPECIFICATIONS AND STATEMENTS OF WORK

- Services
- Products

**Practical Session: Writing specification clauses**

#### CHECKING THE SPECIFICATION

- Functional language correctness
- Theory
- Prototypes
- Realistic specifications
- Compliance test
- Evaluation criteria

**Practical Session: Editing the specification**

#### TYPES OF SPECIFICATIONS

- Government specifications and standards
- Industry standards
- Specifications for complex goods and services
- Performance, design and cancelled specifications

**Practical Session: Creating a specification template**

#### WRITING THE SPECIFICATION

- Time and cost framework
- Collaboration with other purchasers
- Using consultants and specialists
- Liaison with industry
- Specific and non-specific requirements
- Tiering of specifications
- Reviewing specifications
- Constructive changes
- Errors in specifications
- Conflicting requirements, data requirements
- Warranties

**Practical Session: Writing the specification**

#### QUALITY DEPLOYMENT FUNCTION

- Historical background,
- Management and planning tools,
- Customer requirements,
- Technical requirements,
- Planning matrix (customer perceptions)
- Interrelationship between technical and customer requirements

**Practical Session: Using the QFD template as a specification design tool**

#### DOS AND DON'TS OF SPECIFICATION WRITING

#### SPECIFICATION CHECKLIST

#### SUMMARY, OPEN FORUM AND CLOSING



# PRACTICAL SPECIFICATION AND TECHNICAL WRITING FOR ENGINEERS AND TECHNICIANS

## DELEGATE DETAILS

Contact:	Company Name:	
Company Address:		
Suburb:	State:	Post Code:
Phone:	Fax:	Email:
Mr/Ms:	Job Title:	Email:

Should you have more people interested in attending this workshop, please contact us via email: [idc@idc-online.com](mailto:idc@idc-online.com)

## WORKSHOP DETAILS

- BRISBANE** - 22 & 23 June 2015  
Hotel George Williams, Brisbane
- PERTH** - 25 & 27 June 2015  
IDC Technologies, West Perth

Please register by 1 June  
to avoid disappointment

## HOW DID YOU HEAR ABOUT THIS WORKSHOP? (PLEASE TICK)

- Received a brochure in the mail
- Received an email from IDC
- Searched online (Google, Yahoo etc)
- Recommended by a friend/colleague
- Other (please specify) \_\_\_\_\_

## DISCOUNT OFFER - SAVE \$1995 - BOOK 4 DELEGATES, PAY FOR 3!

Register three people on a public two-day workshop and receive your fourth registration FREE

\* discounted and free registration to be used for the same workshop in the same venue.

## PAYMENT DETAILS

Note: Prices are INCLUSIVE of GST

Please Note: Full payment is required prior to the commencement of the workshop.

**BOOKING FOR ONE DELEGATE:** \$1995 x 1 delegates = \$ \_\_\_\_\_

**BOOKING FOR FOUR DELEGATES:** \$1995 x 3 delegates = \$ \_\_\_\_\_  
The fourth participant is FREE

**EARLY BIRD BOOKING OFFER:** (if booking on or before 25 May 2015)

YES, I qualify and would like to receive my 4 FREE eBooks  
PLUS 20% OFF the registration price

LESS 20% = \$ \_\_\_\_\_

TOTAL = \$ \_\_\_\_\_

I wish to pay by  Cheque, made payable to IDC Technologies

Company Order Number: \_\_\_\_\_

Please charge my  Mastercard  Visa Expiry Date: \_\_\_/\_\_\_

\_\_\_\_\_

Cardholder's Name: \_\_\_\_\_

Cardholder's Signature \_\_\_\_\_

On the reverse of your card, above the signature,  
is a security number. In order to authorise your  
card transaction, we require the last 3 digits: \_\_\_\_\_

If the Cardholder's address  
is not the same as shown  
above please tick this box:

## BILLING INFORMATION (PLEASE INVOICE TO)

My billing information is the same as above in 'DELEGATE DETAILS'

Please send invoice to: Company Name: \_\_\_\_\_

Company Address: \_\_\_\_\_

Suburb: \_\_\_\_\_

State: \_\_\_\_\_

Post Code: \_\_\_\_\_

REGISTER  
NOW:

Fax:  
1300 138 533

Mail:  
IDC Technologies  
PO Box 1093  
West Perth WA 6872

Email:  
[idc@idc-online.com](mailto:idc@idc-online.com)

Web Site:  
[www.idc-online.com](http://www.idc-online.com)

ABN 78 003 263 189

ENQUIRIES:  
Phone:  
1300 138 522

## WORKSHOP DETAILS

- Workshops start at 8:30am and finish at 5:00pm daily.
- Registration is from 8:00am on the first day.
- The workshop fees are per delegate and include a reference manual, handouts, lunches and all refreshments.
- Full payment is required prior to the commencement of the workshop.

## EARLY BIRD BOOKING OFFER

Please note that the Early Bird Booking Offer is only available to those registrations received by 25 May 2015 and paid prior to the commencement of the workshop.

## CONFIRMATION

Confirmation of receiving your registration will be sent within 48 hours. Official confirmation and details of the workshop will be sent to you prior to the workshop date. Please wait for official confirmation before making accommodation and/or travel arrangements.

## CANCELLATION

A fee of 20% will apply for written cancellations received 7-14 days prior to the commencement of the workshop. Cancellations received less than 7 days prior to the workshop are not refundable however substitutes are welcome.

## PLEASE NOTE

Venues to be confirmed upon registration. Venues are subject to change. Instructors may change without notice.

IDC Technologies has no affiliation with suppliers or manufacturers and therefore presents a completely unbiased factual view of the industry.

## 100% MONEY BACK GUARANTEE

IDC Technologies' engineers have put considerable time and experience into ensuring that you derive the maximum value from each workshop. If you feel by lunch time of the first day that the workshop is not appropriate, please let us know so that we can arrange a 100% refund of your fee.

## PRIVACY INFORMATION

If your address details are incorrect, or you wish to remove your name from our mailing list, please contact us by phone, fax or email.

At times we make use of lists that cannot be cross-checked against our own database and you may receive a duplicate. If so, please pass this on to an interested colleague.

## CONTINUING PROFESSIONAL DEVELOPMENT (CPD)

This program is designed to meet your continuing professional development requirements. A certificate documenting your attendance will be awarded at the end of the workshop. This serves as important evidence of your continuing professional commitment to your career. This workshop may count towards fulfilling your Engineers Australia CPD obligations - Engineers Australia's CPD Policy can be found at their website: <http://www.engineersaustralia.org.au/>