



**COURSE OVERVIEW HE0632**  
**Certified HAZID Leader**

*Hazard Identification, Analysis and Risk-Based Decisions*

**Course Title**

Certified HAZID Leader: *Hazard Identification, Analysis and Risk-Based Decisions*

**Course Date/Venue**

March 04-08, 2024/Al Dhaфра Meeting Room, Royal Rose Hotel, Abu Dhabi, UAE

**Course Reference**

HE0632

**Course Duration/Credits**

Five days/3.0 CEUs/30 PDHs



**Course Description**



***This practical and highly-interactive course includes various practical sessions and exercises. Theory learnt will be applied using our state-of-the-art simulators.***



A Hazard identification (HAZID) study is the method of identifying hazards to prevent and reduce any adverse impact that could cause injury to personnel, damage or loss of property, environment and production, or become a liability. HAZID is a component of risk assessment and management. It is used to determine the adverse effects of exposure to hazards and plan necessary actions to mitigate such risks.



HAZID study takes into account all of the process and non-process hazards. It helps to design and organize the health, safety and environmental issues in an organization. HAZID involves machine or equipment designers, management and end users, and ensures a full identification of hazards and safeguard procedures in a workplace.

This course is designed to provide participants with a detailed and up-to-date overview of hazard identification, analysis and risk-based decisions. It covers the hazard and risk, accident model, physical and process hazards, the benefits of hazards identification and hazards types by industry; and the hazards through concept of recognition, basic human senses, relationship between senses and higher order processes and what causes hazards?





By the end of the course, participants will be able to recognize the influence of human capabilities and limitations on hazard identification by applying visual detection, sound detection, odor detection, touch detection and hazard recognition; determine explosion hazards, chemical hazards, electrical hazards, weather phenomena hazards and other types of hazards; evaluate hazards covering field surveys, pre-job assessments, facility assessments, incident and near-miss reporting, hazard identification and analysis training; carryout HAZID study, HAZID process, HAZID recording and raising effective corrective actions; implement other hazard identification techniques, HAZOP, failure modes and effects analysis (FMEA), plant walkdowns/audits, what if analysis and task analysis/job hazard analysis (JHA); employ risk-based decisions and risk ranking procedure; follow-up and call to action; and recognize the importance of managing change, published accident databases and resources, revitalized lessons learned, transfer knowledge and learn from incidents.

### Course Objectives

Upon the successful completion of this course, each participant will be able to:-

- Get certified as a “*Certified HAZID Leader*”
- Discuss the hazard and risk, accident model, physical and process hazards, the benefits of hazards identification and hazards types by industry
- Identify hazards through concept of recognition, basic human senses, relationship between senses and higher order processes and what causes hazards?
- Recognize the influence of human capabilities and limitations on hazard identification by applying visual detection, sound detection, odor detection, touch detection and hazard recognition
- Determine explosion hazards, chemical hazards, electrical hazards, weather phenomena hazards and other types of hazards
- Evaluate hazards covering field surveys, pre-job assessments, facility assessments, incident and near-miss reporting, hazard identification and analysis training
- Carryout HAZID study, HAZID process, HAZID recording and raising effective corrective actions
- Implement other hazard identification techniques, HAZOP, failure modes and effects analysis (FMEA), plant walkdowns/audits, what if analysis and task analysis/job hazard analysis (JHA)
- Employ risk-based decisions and risk ranking procedure
- Follow-up and call to action as well as recognize the importance of managing change, published accident databases and resources, revitalized lessons learned, transfer knowledge and learn from incidents

### Exclusive Smart Training Kit - H-STK®



Participants of this course will receive the exclusive “Haward Smart Training Kit” (H-STK®). The H-STK® consists of a comprehensive set of technical content which includes **electronic version** of the course materials, sample video clips of the instructor’s actual lectures & practical sessions during the course conveniently saved in a **Tablet PC**.

### Who Should Attend

This course provides an overview of all significant aspects and considerations of HAZID study and leadership for safety/environment professionals, production and facilities managers, design engineers, process engineers, facilities engineers, instrumentation and control engineers, regulatory/enforcement and compliance officers, process and plant operators and maintenance personnel. Further, the course is also beneficial for directors and senior managers with responsibility for implementing systems of effective corporate governance and management of risk; internal auditors involved in assessing systems of internal control across all the functions of their organisations; and those with operational responsibilities who need to appreciate risk management in more detail.

### Course Certificate(s)

- (1) Internationally recognized Competency Certificates and Plastic Wallet Cards will be issued to participants who completed a minimum of 80% of the total tuition hours and successfully passed the exam at the end of the course. Successful candidate will be certified as a "Certified HAZID Leader". Certificates are valid for 5 years.

Recertification is FOC for a Lifetime.

### Sample of Certificates

The following are samples of the certificates that will be awarded to course participants:-





- (2) Official Transcript of Records will be provided to the successful delegates with the equivalent number of ANSI/IACET accredited Continuing Education Units (CEUs) earned during the course

\* Haward Technology \* CEUs \* Haward Technology \* CEUs \* Haward Technology \* CEUs \* Haward Technology \*



## Haward Technology Middle East

Continuing Professional Development (HTME-CPD)

# CEUs

### CEU Official Transcript of Records

**TOR Issuance Date:** 14-Nov-23  
**HTME No.** 74852  
**Participant Name:** Waleed Al Habeeb

Program Ref.	Program Title	Program Date	No. of Contact Hours	CEU's
HE0632	Certified HAZID Leader: Hazard Identification, Analysis and Risk-Based Decisions	November 10-14, 2023	30	3.0

**Total No. of CEU's Earned as of TOR Issuance Date** **3.0**

**TRUE COPY**  
  
**Jaryl Castillo**  
 Academic Director

Haward Technology has been approved as an Accredited Provider by the International Association for Continuing Education and Training (IACET), 2201 Cooperative Way, Suite 600, Herndon, VA 20171, USA. In obtaining this approval, Haward Technology has demonstrated that it complies with the ANSI/IACET 1-2018 Standard which is widely recognized as the standard of good practice internationally. As a result of their Authorized Provider membership status, Haward Technology is authorized to offer IACET CEUs for programs that qualify under the ANSI/IACET 1-2018 Standard.

Haward Technology's courses meet the professional certification and continuing education requirements for participants seeking Continuing Education Units (CEUs) in accordance with the rules & regulations of the International Association for Continuing Education & Training (IACET). IACET is an international authority that evaluates programs according to strict, research-based criteria and guidelines. The CEU is an internationally accepted uniform unit of measurement in qualified courses of continuing education.

Haward Technology is accredited by



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## Certificate Accreditations


Certificates are accredited by the following international accreditation organizations:-

- 
The International Accreditors for Continuing Education and Training (IACET - USA)

Haward Technology is an Authorized Training Provider by the International Accreditors for Continuing Education and Training (IACET), 2201 Cooperative Way, Suite 600, Herndon, VA 20171, USA. In obtaining this authority, Haward Technology has demonstrated that it complies with the **ANSI/IACET 2018-1 Standard** which is widely recognized as the standard of good practice internationally. As a result of our Authorized Provider membership status, Haward Technology is authorized to offer IACET CEUs for its programs that qualify under the **ANSI/IACET 2018-1 Standard**.

Haward Technology's courses meet the professional certification and continuing education requirements for participants seeking **Continuing Education Units (CEUs)** in accordance with the rules & regulations of the International Accreditors for Continuing Education & Training (IACET). IACET is an international authority that evaluates programs according to strict, research-based criteria and guidelines. The CEU is an internationally accepted uniform unit of measurement in qualified courses of continuing education.

Haward Technology Middle East will award **3.0 CEUs** (Continuing Education Units) or **30 PDHs** (Professional Development Hours) for participants who completed the total tuition hours of this program. One CEU is equivalent to ten Professional Development Hours (PDHs) or ten contact hours of the participation in and completion of Haward Technology programs. A permanent record of a participant's involvement and awarding of CEU will be maintained by Haward Technology. Haward Technology will provide a copy of the participant's CEU and PDH Transcript of Records upon request.

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British Accreditation Council (BAC)

Haward Technology is accredited by the **British Accreditation Council** for **Independent Further and Higher Education** as an **International Centre**. BAC is the British accrediting body responsible for setting standards within independent further and higher education sector in the UK and overseas. As a BAC-accredited international centre, Haward Technology meets all of the international higher education criteria and standards set by BAC.

## Course Fee

**US\$ 5,500** per Delegate + **VAT**. This rate includes H-STK<sup>®</sup> (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

## Accommodation

Accommodation is not included in the course fees. However, any accommodation required can be arranged at the time of booking.



**Course Instructor(s)**

This course will be conducted by the following instructor(s). However, we have the right to change the course instructor(s) prior to the course date and inform participants accordingly:



**Mr. Peter Christian**, BSc, PGDip, NHD, is an **International Expert** in **Safety, Health, Environmental and Quality** with over **40 years** of practical and industrial experience in **Incident Root Cause Analysis & Abnormality Reporting, Accident/Incident Investigation, Root Cause Analysis & Reporting, Incident RCA Investigation & Corrective Actions, HSE Emergency Planning & Crisis Management, Crisis Management & Risk Assessment, Emergency Response & Crisis Management Plan, Corporate Social Responsibility, Sustainable Development & Environmental Dimensions, Permit to Work (PTW) System, PTW Issuer, Work Management System & e-PTW Holder, PTW Users, Safe Work Permit Procedure, Work Permit Refresher, Lock Out/Tag Out Permit to Work Systems, Hazard Identification & Risk Assessments, Job Safety Analysis (JSA), Confined Space Entry, Working at Height, Lockout/Tagout (LOTO) Lifting & Rigging, Excavation & Trenching, Personal Protective Equipment (PPE), Advanced HSSE Principles & Practices, HSSE System, HSSE Procedure, Hazard Operability (HAZOP), Hazardous Waste Operations (HAZWOPER), Hazardous Materials (HAZMAT), Hazard Communication (HAZCOM), PHA (Process Hazard Analysis), FMEA, Hazard Identification (HAZID), Safe Work Practices, Space Entry, Work Permit Procedures, Personal Protective Equipment (PPE), Self-Contained Breathing Apparatus (SCBA), Emergency Response Procedures (ERP), Behavioural Based Safety (BMS), ISO 14001, OHSAS 18001, ISO 9001, Process Safety Management (PSM), Exposure Assessment & Control, Environmental Pollution Interpretation, Safety, Health, Environmental & Quality Management (SHEQ), Behavioral Safety Management, Industrial Hygiene, Human Factors Engineering, Risk Assessment, Fire Extinguishers, Fire Fighting, Rope Rescue Operations, Emergency Response within process industries. He is currently the **President** of **NKWE** and spearheads the company's major projects and business ventures, where he specializes in the areas of **SHEQ solutions, ISO, Quality Control and OSHA systems**. Previously, he has had much on-hand experience in the initiation and management of projects (technical as well organizational development) including involvement in **design of process plants; the commissioning & decommissioning** of process plants; the **operational and financial responsibility** for large process operations; **risk management; operational and maintenance management, crisis and emergency management, accident investigation, risk assessment, hazard identification and emergency preparedness & response** (oil spillage and gas explosions).**

Much earlier in his career, Mr. Christian was a **HAZOP Team Leader** for numerous **HAZOP** studies and he has further managed the **Health, Safety & Environmental and Quality** requirements of a large process company. This included responsibilities as an auditor for compliance against **SHEQ standards, ISO standards** and the **Fatal Risk Control Protocols**. He then facilitated the development and implementation of the above standards as a group and at site level as part of the SHEQ council. Moreover, he established, trained and led a Rope rescue team and a high-level emergency care clinic and ambulance service for many years. He still abseils recreationally and leads adventure groups during abseiling activities and serves as a rescue team member for mountain and water emergencies.

During his career life, Mr. Christian has gained his practical and field experience through his various significant positions as the **Plant Manager, Permit to Work Issuer, Project Metallurgist, Metallurgist, HSSE Team Leader, SHEC Superintendent, Mentor, Instructor/Trainer, Acting Technical Manager, Process Plant Superintendent, Acting Project Leader, Acting Plant Superintendent, Appointed Health & Safety & Environmental Superintendent, Production Technician, Acting Senior Shiftsman, Foreman and Learner – Official Extraction Metallurgy** from various companies such as the **NKWE Consulting, SAMANCOR, Middleburg Mine Services (Pty) Ltd., Koomfontein Mines, Emelo Mine Services, Gencor Group and South African Defence Force**.

Mr. Christian has a **Bachelor Degree in Chemical Engineering, Postgraduate Studies in Advanced Executive Programme** and a **National Higher Diploma (NHD) & a National Diploma in Extraction Metallurgy**. He is also a **Certified Auditor in OHSAS 18001, ISO 14001 & ISO 9001, a Certified Instructor/Trainer, a Certified Internal Verifier/Assessor/Trainer by the Institute of Leadership & Management (ILM), a Six Sigma Black Belt Coach** and holds a **Certificate in General Health and Safety, a Certificate in Managing Safety: Operations Manager's Safety, a Certificate in Championing Enterprise-wide Risk Management, a Certificate in Risk Assessment, a Certificate in Root Cause Analysis, a Certificate in Facilitate Learning Using a Variety of Given Methodologies NQF Level 5 (EDTP-SETA) as a Certified Facilitator**. He has further delivered innumerable courses, trainings, workshops and conferences globally.



**Training Methodology**

All our Courses are including **Hands-on Practical Sessions** using equipment, State-of-the-Art Simulators, Drawings, Case Studies, Videos and Exercises. The courses include the following training methodologies as a percentage of the total tuition hours:-

- 30% Lectures
- 20% Practical Workshops & Work Presentations
- 30% Hands-on Practical Exercises & Case Studies
- 20% Simulators (Hardware & Software) & Videos

In an unlikely event, the course instructor may modify the above training methodology before or during the course for technical reasons.

**Course Program**

The following program is planned for this course. However, the course instructor(s) may modify this program before or during the course for technical reasons with no prior notice to participants. Nevertheless, the course objectives will always be met:

**Day 1: Monday, 04<sup>th</sup> of March 2024**

0730 – 0800	Registration & Coffee
0800 – 0815	Welcome & Introduction
0815 – 0830	<b>PRE-TEST</b>
0830 – 0930	<b>Introduction</b> Hazard and Risk • Accident Model • Physical and Process Hazards • Benefits of Hazards Identification • Hazards Types by Industry
0930 – 0945	Break
0945 – 1100	<b>Identify Hazards</b> Concept of Recognition • Basic Human Senses • Relationship Between Senses and Higher Order Processes • What Causes Hazards?
1100 – 1230	<b>Influence of Human Capabilities &amp; Limitations on Hazard Identification</b> Visual Detection • Sound Detection • Odor Detection • Touch Detection • Hazard Recognition
1230 – 1245	Break
1245 – 1420	<b>Explosion Hazards</b> Reactive Explosion Hazards • Flammable Explosion Hazards • Physical Explosion Hazards
1420 – 1430	<b>Recap</b> Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow
1430	Lunch & End of Day One

**Day 2: Tuesday, 05<sup>th</sup> of March 2024**

0730 – 0930	<b>Chemical Hazards</b> Toxic Chemical Hazards • Fire Hazards • Corrosive Chemical Hazards
0930 – 0945	Break
0945 – 1100	<b>Electrical Hazards</b> Shock/Short Circuit • Fire • Lightning Strikes • Static Electrical Discharge • Loss of Power
1100 – 1230	<b>Weather Phenomena Hazards</b> Temperature Extreme Hazards • Hurricane • Flood • Wind
1230 – 1245	Break





1245 – 1330	<b>Other Types of Hazards</b> Excavation Hazards • Asphyxiation Hazards • Elevation Hazards • Thermal Hazards • Vibration Hazards • Mechanical Failure Hazards • Mechanical Hazards
1420 – 1430	<b>Recap</b> Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow
1430	Lunch & End of Day Two

**Day 3: Wednesday, 06<sup>th</sup> of March 2024**

0730 – 0930	<b>Other Types of Hazards (cont'd)</b> Corrosion Hazards • Noise Hazards • Radiation Hazards • Impact Hazards • Struck Against Hazards • Visibility Hazards
0930 – 0945	Break
0945 – 1100	<b>Evaluate Hazards</b> Field Surveys • Pre-Job Assessments • Facility Assessments • Incident and Near-Miss Reporting • Hazard Identification and Analysis Training
1100 – 1230	<b>HAZID Study</b> The HAZID Team • The HAZID Process • Example HAZID Checklists
1230 – 1245	Break
1245 – 1420	<b>HAZID Study (cont'd)</b> Recording the HAZID (the Hazard Register/Fault Schedule/Hazard Log) • Raising Effective Corrective Actions
1420 – 1430	<b>Recap</b> Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow
1430	Lunch & End of Day Three

**Day 4: Thursday, 07<sup>th</sup> of March 2024**

0730 – 0930	<b>Other Hazard Identification Techniques</b> HAZOP • Failure Modes and Effects Analysis (FMEA) • Plant Walkdowns/Audits • What If? Analysis • Task Analysis/Job Hazard Analysis (JHA)
0930 – 0945	Break
0945 – 1100	<b>Make Risk-Based Decisions</b> Hazard Ranking • Understanding Risk • Risk Ranking
1100 – 1230	<b>Risk Ranking Procedure</b> Severity • Hierarchy of Safeguards or Layers of Protection • Likelihood • Risk Ranking • Example 1 – Flammable/Explosive Hazard • Example 2 – Flammable Hazard • More Detailed Matrices • Similarities between More Sophisticated Process Hazard Evaluation Techniques
1230 – 1245	Break
1245 – 1420	<b>Follow-up &amp; Call to Action</b> Safety Culture • Management Commitment • Employee Ownership • Implement an Effective Hazard Management Program • Hazard Communication • Call to Action
1420 – 1430	<b>Recap</b> Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow
1430	Lunch & End of Day Four



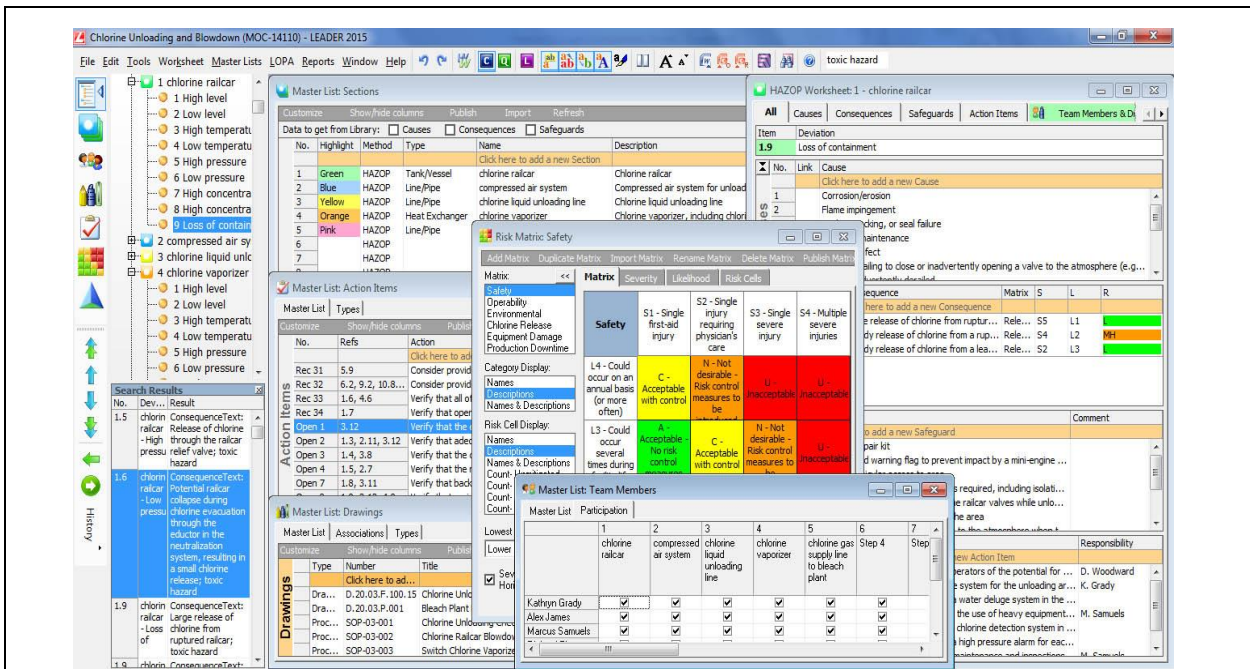


**Day 5: Friday, 08<sup>th</sup> of March 2024**

0730 – 0930	<b>Learning &amp; Continuous Improvement</b> Importance of Managing Change • Published Accident Databases & Resources • Revitalizing Lessons Learned • Transfer of Knowledge • Learning from Incidents
0930 – 0945	Break
0945 – 1100	<b>Practical HAZID Study - Oil Refinery Fire, 2007</b>
1100 – 1230	<b>Practical HAZID Study - Oil Refinery Fire, 2007 (cont'd)</b>
1230 – 1245	Break
1245 – 1300	<b>Practical HAZID Study - Oil Refinery Fire, 2007 (cont'd)</b>
1300 – 1315	<b>Course Conclusion</b> Using this Course Overview, the Instructor(s) will Brief Participants about the Course Topics that were Covered During the Course
1315 – 1415	<b>COMPETENCY EXAM</b>
1415 – 1430	Presentation of Course Certificates
1430	Lunch & End of Course

**Simulator (Hands-on Practical Sessions)**

Practical sessions will be organized during the course for delegates to practice the theory learnt. Delegates will be provided with an opportunity to carryout various exercises using our state-of-the-art “Howard PHA/HAZOP”, “QRA”, “Visio”, “Mindview” and “Workplace Risk Assessment” simulators.



The screenshot displays the Howard PHA/HAZOP Simulator interface. Key components include:

- Master List: Sections:** A table listing sections with columns for No., Highlight, Method, Type, Name, and Description. Sections include Tank/Vessel, Line/Pipe, and Heat Exchanger.
- Risk Matrix Safety:** A matrix with columns for Severity (S1-S4) and Likelihood (L1-L4). Risk cells are color-coded (Green, Yellow, Red) and labeled with risk levels like 'Acceptable with control' or 'Not desirable - Risk control measures to be taken'.
- Master List: Action Items:** A table with columns for No., Refs, and Action. It lists tasks like 'Verify that all of the chlorine vaporizer...'.
- Master List: Team Members:** A participation table with columns for team members (Kathryn Grady, Alex James, Marcus Samuels) and various process steps.
- Search Results:** A list of search results for 'chlorine railcar' and 'chlorine vaporizer'.
- Drawings:** A list of drawings related to the chlorine railcar and vaporizer.

**Howard PHA/HAZOP Simulator**



The screenshot displays the QRA System Simulator interface. It includes a project tree on the left listing components like Engine System, Fuel System, and Avionics. A central window shows a fault tree diagram with nodes such as 'Incorrect Sensor Data', 'Wing Failed', and 'Wing System Stuck'. A 'QRA Results View' window is open, showing a CDF graph with a point estimate of 0.3501 and a table of statistical values.

Statistic	Value
Mean	0.3501
1st	0.1893
5th	0.2282
10th	0.2544
50th	0.2813
90th	0.4439
95th	0.469
99th	0.5157

**QRA System Simulator**

The screenshot shows Visio Professional with an Ishikawa diagram titled 'Ishikawa diagram - Factors reducing competitiveness'. The diagram is a fishbone chart with a central spine pointing to 'Reduced Competitiveness'. Major categories include External Environment, Management Project Approach, Management, Corporate Structure, Staff, and Process Approach to Management. Specific causes listed include 'Disregard for Research and Development', 'Lack of Motivation Programs', 'High Prices of Development', 'Lack of Training Programs', 'Incompetent Managers', and 'Process Landscape Doesn't Correspond to Activities'. The software interface includes a 'Shapes' panel on the left and a status bar at the bottom.

**Visio Software**



The screenshot displays the Mindview Software interface. At the top, a 'Map View' window shows a mind map with nodes for 'Assessment', 'Planning', 'Measurement', and 'Monitoring'. A red dashed arrow points from a node in the mind map to a corresponding section in a Word document below. The Word document is titled 'PROBLEM SOLVING' and contains a structured list of steps and sub-points corresponding to the mind map nodes. The text in the Word document includes:
 

- Planning
  - A. Recognise symptoms
  - B. Set up team
  - C. Identify main problems
    - 1. Problem 1
    - 2. Problem 2
    - 3. ...others
  - D. Select problem
- Measurement
  - A. Quantitative
  - B. Qualitative
- Analysis
  - A. Possible causes
    - 1. Cause 1
    - 2. Cause 2
    - 3. ...others

**Mindview Software**

The screenshot shows the 'Workplace Risk Assessment Input Form' (WRAM v1.0.00) for 'Ramsgate'. The main section is 'Lighting' with five assessment questions (5.1 to 5.5) and a 'Details / Comments' column. The questions are:
 

- 5.1 Does the workplace have suitable and sufficient lighting? (not obscured, for example by stacked goods)
- 5.2 So far as is reasonably practicable, is natural light used? (people generally prefer to work in natural light)
- 5.3 Are all stairwells and walkways lit and without shadow? (shadows should not be cast on stair treads)
- 5.4 Is emergency lighting required? If yes, is it provided? (where sudden loss of light would present a serious risk)
- 5.5 Is all lighting equipment regularly cleaned and maintained? (also see section 2)

 A right-hand sidebar contains a list of categories for navigation, including 'Admin' Arrangements / Main Systems, 'Ventilation & Temperature', 'Lighting', 'Cleanliness and Waste', 'Room Dimensions / Workstation', 'Floors and Traffic Routes', 'Falls or Falling Objects', 'Windows & Transparent or Translucent', 'Doors and Gates', 'Escalators and Moving Walkways / Sanitary and Washing Facilities', 'Drinking Water / Accomodation for Clothing', 'Facilities Clothing / Rest & to Eat Meals', 'Safety Notice Boards / 1st Aid', 'Work Equipment / MH Operation', 'Miscellaneous Health Hazards (p1)', 'Miscellaneous Health Hazards (p2)', 'Actions', 'Sign-off', 'Notes', 'Staff Briefed', 'Addendum A', and 'Addendum B'.
 

Section	Y/N/NA	Details / Comments
5.1		
5.2		
5.3		
5.4		
5.5		

**Workplace Risk Assessment**

**Course Coordinator**

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