Workplace Risk Assessment System (WRAS) User Guide

This user guide provides a step by step walkthrough on the use of WRAS.

Please contact the Office of Health and Safety at: ohs@ntu.edu.sg if you have any queries with regards to the system or encounter any technical issues.

Note:

All individuals are to conduct his / her own risk assessment(s) according to the activities that are being carried out.

Risk assessment is NOT a team based exercise in SPMS

(1) Login

The WRAS can be accessed via the SPMS main safety webpage.


Upon logging in, you will be able to see the welcome page

![Welcome page](image)
(2) Create new RA

- Under RA Application, Click on the [New RA] hyperlink.
- The [Select Type of Creation] page will be displayed.
- Select the [Create New RA] radio button.
- Click on the [Next] button.
- The [Create New RA] page will be displayed

To create a New Risk Assessment, the following fields are required to be filled.

- Enter a [Project Title]
- Select [School of Physical and Mathematical Sciences] from the [Your School/Department] dropdown list.

*Note:* 
*The RA will be considered as INVALID for works in SPMS if any other School/Department is selected.*

- Once a school has been selected then the [Division] dropdown list is enabled.
- Select a [Division] from the drop down list.
- Select [School of Physical and Mathematical Sciences] from the [School/Department where work is carried out] dropdown list.
  - If Others is selected, [Pls Specify] textbox will be displayed
• Enter the location in the [Location Details] text box where the project is carried out

(Eg: Laboratory room number: CBC-05-01)

Note:

You can enter more than one location if multiple locations are used
(3) Conducted By

- The name of the person conducting the risk assessment is automatically entered in the “Conducted by” field:

![Conducted By](image)

(4) Approved By

Note:

The risk assessment can only be approved by the reporting officer / supervisor of the creator.

If you are a project student, post-graduate student or post doctorate fellow, this must be your professor.

Example (1): Risk assessment of FYP students and posgrads to be approved by the project's supervisor

Example (2): Risk assessment of PI to be approved by his / her reporting officer

The risk assessment will be considered as INVALID if the wrong choice of person approving is being selected

- Enter [Approved By] field.
- Click on the [ ] icon.
- A [Approved By] window is displayed.

![Approved By](image)

- Enter a search criteria in the [Search] field
- Click on the [Search] button.
Select the Reporting Officer's name from the [Search Result]

Click on the [Done] button to complete adding the person.

To Cancel/Exit the window, Click on the [Cancel] button.

(5) Adding a New Activity

One RA can have more than one activity.

Click on the [+] button to add a new activity.

A [Add Activity] window will be displayed.

User can add in new activity by entering the description. The dropdown selection ‘Activity sequence’ is for user to insert new activity between existing activities. This is only applicable when user amends his/her RA from an existing RA template.

For creation of new RA, user just enters the description of the work activity in the [Work Activity Description] text box.

More activities can be added by clicking on the [+] button.
(6) Adding a New Hazard

One Activity can have more than one hazard.

- Click on the [Add New Hazard] hyperlink
- A [Add Hazard] window will be displayed.

- Select a [Hazard] from the drop down list.
- Select a [Sub Hazard] from the drop down list.
- Select a [Possible Accident/ Ill health to persons, fire or property loss] from the drop down list

Note:
Select “Others” and specify the hazard associated with the activity if the type of hazard associated with the activity is not indicated in the drop down list.

Note:
Select “Others” and specify the sub hazard associated with the hazard if the type of sub hazard is not indicated in the drop down list

Note:
Select “Others” and specify the possible accident/ill health if the type of possible/ill health is not indicated in the drop down list

- Enter [Existing Risk Control] in the text box.
Note:
User may enter more than 1 existing risk control for each particular hazard according to hierachery of control measures

- Enter the [Severity] and [Likelihood] from the drop down list.

Please refer to Appendix A for the list of severity types

Please refer to Appendix B for the list of likelihood types

The RPN will be calculated automatically using the following formula:

\[ RPN = [\text{Severity}] \times [\text{Likelihood}] \]

Please refer to Appendix C for the RPN score classification colour

Note:
If RPN is more than 6, when the user clicks on the [submit], the system will prompt the user to add Additional Risk Control Measures.

If RPN is 6 or less, user need not add additional Risk Control Measures. The risk assessment can be submitted to the user’s reporting officer / supervisor upon clicking on the [submit] in the main page

We expect that for all activities that have been subjected to previous RA, the RPN will already be below 6 and no Additional Risk Control would be needed.
For RPN more than 6,

- Click on the Risk Control Hyperlink
- A [Risk Control] window is displayed

- Enter the [Additional Risk Control Measures] in the text box.
- Enter the [Severity] and [Likelihood] from the drop down list.

The RPN will be calculated automatically using the following formula:

\[ RPN = \text{[Severity]} \times \text{[Likelihood]} \]

Note:
If RPN is more than 15, when the user clicks on the "submit" the system will prompt the user to consult his/her RO
However you do not need to do this if no additional measures are required.
Follow up by

- Specify the [Follow up] field by clicking on the icon.
- A [Follow up Address] window will be displayed.
- Enter a search criteria in the [Search] field.
- Click on the [Search] button.
- Select the name from the [Search Result].
- Click on the [  >  ] button.
- The name is in the [Added] column.
- Click on the [Done] button to complete adding the person.
- To cancel/Exit the window, Click on the [Cancel] button.
- Click on the [Save] button to add the Risk Control
- Click on the [Cancel] button to exit/close the window
(7) Save RA as Draft

User is able to save an in-progress RA as draft and continue to work on it when he/she login another time.

To save a RA as draft, the user must at least input the school/department.

Click on the [Save As Draft] button to save the Risk Assessment Application.
(8) Submit RA

- Click on the [Submit] button to save the Risk Assessment Application to submit for approval directly.
- A [Confirmation Message] window is displayed.
- Click on the [OK] button.
- The RA application is submitted for approval successfully.
- The Risk Assessment application will be sent to the Reporting Officer for approval and the status of the application will be pending.
- A Notification email will be sent to the Reporting Officer.
9. Create Risk Assessment (RA) using an existing RA template

- Select the [Use existing RA as template] radio button.
- Select a template from the drop down list.
- Click on the [Submit] button to save the Risk Assessment Application to submit for approval directly.

- The Risk Assessment application will be sent to the RO for approval and the status of the application will be pending.
- A Notification email will be sent to the Reporting Officer.
For amendments of existing RA,

- Amend the Existing Template
- Click on the [Save As Draft] button to save the Risk Assessment Application.
- Click on the [Submit] button to save the Risk Assessment Application to submit for approval directly.
- The Risk Assessment application will be sent to the RO for approval and the status of the application will be pending.
- A Notification email will be sent to the Reporting Officer.
(10) **View Draft Risk Assessment Application**

When user login to WRAS again, he/she can retrieve the draft RA and continue from where he/she has left off.

- Click on the [Draft RA] hyperlink
- Click on the [Title] hyperlink to view the Risk Assessment application
- After editing the Risk Assessment application, the user has the choice to save it as a draft or resubmit the Risk Assessment application
- The status of the application will be [pending]
View Submitted Risk Assessment Application

- Click on the [Title] hyperlink to view the Risk Assessment application
- Click on the Edit icon to edit the Risk Assessment application
- Risk Assessment application with the status ‘Pending’, ‘Approved’ or ‘Rejected’ are editable
- After editing the Risk Assessment application, the user has the choice to save it as a draft or resubmit the Risk Assessment application.
- If the application is re-submitted, the status of the application will be changed to ‘Pending’ for approval
(12) NTU Application Mail

(12a) Submission Status

Upon submission of the completed risk assessment to the reporting officer / supervisor, the user will receive the following message from NTU Application Mail in his / her email inbox. The work activity can only be carried out after the submitted risk assessment has been approved.
(12b) Approved Risk Assessment

The user will receive the following message from NTU Application Mail in his / her email inbox after the reporting officer / supervisor had approved the submitted risk assessment.
(12c) Rejected Risk Assessment

The user will receive the following message from NTU Application Mail in his / her email inbox after the reporting officer / supervisor had rejected the submitted risk assessment. The user has to log in to the WRAS again to review the risk assessment before re-submitting again for approval.
(12d) Pending Approval 5th Day Reminder

The user will receive the following message from NTU Application Mail in his / her email inbox if the reporting officer / supervisor did not take any action after the risk assessment has been submitted for 5 days

Dear ""<user_name>"",

The risk assessment (ID: "RA_SPMS_169") has been submitted for 5 days, the reporting officer has not taken any action. Please contact the RA via email regarding the risk assessment.

For enquiries, please contact your school/department administrator.

Thank you for your attention.

Workplace Risk Assessment System

(Note: this is a computer generated email. Please do not reply to this email.)
(12e) Pending Approval 10th Day Reminder

The user will receive the following message from NTU Application Mail in his / her email inbox if the reporting officer / supervisor did not take any action after the risk assessment has been submitted for 10 days.

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Dear user,

The risk assessment (ID: RA_SPMS_160) has been submitted for 10 days, the reporting officer has not taken any action.

Please contact the RA via email regarding the risk assessment.

For enquiries, please contact your school/department administrator.

Thank you for your attention.

Workplace Risk Assessment System

(Notes: This is a computer generated email. Please do not reply to this email.)

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Pending Approval 15\textsuperscript{th} Day Reminder (Auto-Reject)

The user will receive the following message from NTU Application Mail in his / her email inbox if the reporting officer / supervisor did not take any action after the risk assessment has been submitted for 15 days. The submitted risk assessment will be auto rejected.
## APPENDIX A: LIST OF SEVERITY TYPES

<table>
<thead>
<tr>
<th>SEVERITY INDEX</th>
<th>SEVERITY DESCRIPTION</th>
<th>WORKPLACE SAFETY</th>
<th>WORKPLACE HEALTH</th>
<th>ENVIRONMENT</th>
<th>FIRE DAMAGE</th>
<th>DOWNTIME INCURRED</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>CRITICAL</td>
<td>Fatality, single or multiple</td>
<td>Acute Poisoning, Failure of major Bodily Function</td>
<td>Spills to outside campus</td>
<td>More than $10 million damages</td>
<td>More than 1 year for full re-instatement</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Permanent Body Injury or Loss of Use</td>
<td>Infection with no known cure</td>
<td>Infection outside confines of campus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>VERY SERIOUS</td>
<td>Injury requiring 30 days of hospitalization and/or medical leave</td>
<td>Moderate exposure, reversible injury to Bodily Functions on prolonged recovery</td>
<td>Spills to outside building</td>
<td>More than $1 million damages</td>
<td>More than 3 months for full re-instatement</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Temporary Body Injury or Loss of Use</td>
<td>Infection with known cure but extensive treatment</td>
<td>Infection outside confines of building affecting neighboring buildings but within campus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>SERIOUS</td>
<td>Injury requiring 10 days of hospitalization and/or medical leave</td>
<td>Mild Exposure, Reversible injury to Bodily Functions with less than 1 month recovery</td>
<td>Spills to outside laboratory room</td>
<td>More than $100K damages</td>
<td>More than 1 month for full re-instatement</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Temporary Body Injury or Loss of Use</td>
<td>Infection with known cure but extensive treatment</td>
<td>Infection outside confines of workplace but within building only</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>MARGINAL</td>
<td>Injury Requiring maximum of 3 days of medical leave only</td>
<td>Very mild exposure, reversible injury to Bodily Functions with less than 3 days recovery</td>
<td>Spills to outside workplace but within laboratory</td>
<td>More than $10K damages</td>
<td>More than 5 days for full re-instatement</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Temporary Body Injury or Loss of Use</td>
<td>Infection with known cure but treatment needed</td>
<td>Infection outside confines of laboratory but within building only</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>NEGLIGIBLE</td>
<td>First aid treatment only</td>
<td>Very mild exposure, reversible injury to Bodily Functions with less than 3 days recovery</td>
<td>Spills within workplace only</td>
<td>Less than $10k damages</td>
<td>No significant</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No or superficial injury</td>
<td>No Exposure</td>
<td>No infection or infection with no effects</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### APPENDIX B: List of Likelihood Types

<table>
<thead>
<tr>
<th>Likelihood Index</th>
<th>Likelihood Description</th>
<th>Likelihood of Occurrence / Exposure Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Frequent</td>
<td>Likely to occur many times per year</td>
</tr>
<tr>
<td>4</td>
<td>Moderate</td>
<td>Likely to occur once per year</td>
</tr>
<tr>
<td>3</td>
<td>Occasional</td>
<td>Might occur once in three years</td>
</tr>
<tr>
<td>2</td>
<td>Remote</td>
<td>Might occur once in five years</td>
</tr>
<tr>
<td>1</td>
<td>Unlikely</td>
<td>Might occur once in ten years</td>
</tr>
</tbody>
</table>
### APPENDIX C:

<table>
<thead>
<tr>
<th>Colour</th>
<th>RPN Score</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red</td>
<td>16 – 25</td>
<td>High</td>
</tr>
<tr>
<td>Amber</td>
<td>12 -15</td>
<td>Warning</td>
</tr>
<tr>
<td>Blue</td>
<td>8 -10</td>
<td>Medium</td>
</tr>
<tr>
<td>Green</td>
<td>1 – 6</td>
<td>Low</td>
</tr>
</tbody>
</table>