1. **Preamble**

1.1 In our continuous effort to promote academic integrity and inculcate good practices in scholarly work, UTAR now subscribes to Turnitin, which is a web-based application that checks for the originality of submitted materials, for the use of academic staff and students.

1.2 Turnitin’s OriginalityCheck helps to check the submitted paper for improper citation or potential plagiarism by comparing it against Turnitin’s content databases, consisting of current and archived web pages, student submitted papers and content from Turnitin’s content partnerships with leading content publishers including library databases, textbook publishers, digital reference collections, subscription-based publications and books which are increasing daily at tremendous rate.

(i) For each paper submitted, Turnitin generates an originality report that rates the amount of text matching source files in its database on a scale from 0% to 100%. The report is presented in an intuitive and detailed manner which allows us to make an informed decision on the originality of the submitted paper - whether this is or is not likely a case of plagiarism.

(ii) When Turnitin detects similarities between the submitted paper and an outside source, it bolds the text, turns the text to red, places it in a highlighted box and assigns it a number. That number corresponds to an entry in the window on the right side, which is where Turnitin displays suspect outside sources. The sources are listed according to the percentage of the match with the highest percentage coming first.

(iii) When the mouse is moved over the highlighted text in the submitted paper in the originality report, the corresponding source on the right illuminates allowing the supervisor/instructor to view the suspected source. When the supervisor/instructor clicks on the numbered text box in the submitted paper, a window appears displaying the matching text within the context of the suspect source. The matching text is blocked out and highlighted as in the submitted paper for easy comparison.

A graphical representation on the above is illustrated in the diagram on the next page.
Universiti Tunku Abdul Rahman

Guideline Title: Generating Originality Report for Thesis/Dissertation/Project Report Using Turnitin

Guideline Number: GD-IAD-003
Rev No: 0
Effective Date: 01/10/2013
Page No: 2 of 12

[Source: www.turnitin.com]
2. **Verifying the Originality of Content in Thesis/Dissertation/Project Report**

2.1 To verify the level of originality of the content in the thesis/dissertation/project report submitted, UTAR now requires every student from postgraduate and undergraduate programmes to submit his thesis/dissertation/project report to Turnitin for originality check before the student formally submits the thesis/dissertation/project report for examination.

2.2 After logging in at turnitin.com, student can upload his thesis/dissertation to Turnitin, which will scan the submitted work on its originality. Using a variety of algorithms, Turnitin compares the submitted work to material found on the web and other previously submitted papers. It will detect matches and generate an originality report which can be viewed in an interactive interface or downloaded.

2.3 The overview of the processes involved in the generation of originality report by students submitting their dissertation/thesis/project report to Turnitin is as follows:

- **Supervisor creates account for student to submit thesis/dissertation/project report to Turnitin**

- **Student log in to Turnitin to upload his dissertation/thesis/project report to generate the originality report**

- **Student/Supervisor downloads/prints the originality report generated by Turnitin for supervisor and co-supervisor (if any) to review and endorse**

- **Supervisor and Co-Supervisor (if any) review and endorse the originality report by signing the prescribed form**

- **Creates account for student**

  (Please download user guide “GD-SODEMC-Turnitin-002-User Guide for Instructor” from this link http://research.utar.edu.my/ipsweb/currentstudent.html)

- **Choose the required settings (See “4. Explanation on Filters and Settings” below)**

- **Turnitin system will then send email notification to student’s email address [xxxxxxx@1utar.my]. Note If student’s email address is still the old student email address (i.e. @mail2.utar.edu.my), please advise student to change to new email address**

- **Student log in to Turnitin after receiving email notification from Turnitin**

  (Please download user guide “GD-SODEMC-Turnitin-003-User Guide for Student” from this link http://research.utar.edu.my/ipsweb/currentstudent.html)

- **Submit your dissertation/thesis. For SUBMISSION TITLE, type in the Title of Thesis/Dissertation/Project**

- **Once dissertation/thesis/project report had been analysed by Turnitin, it generates an Originality Report which displays a Similarity Index and the list of URLs to the source sites – See Appendix 1-1**

- **Download a softcopy and print out a hardcopy of the originality report for review and submission together with the Dissertation/Thesis/Project Report**

- **Ensure the limits in 3.2 (i) – (iii) for required parameters of originality are adhered to**

- **Endorse the originality report by signing the prescribed form – See Appendix 1-3 or Appendix 1-4**

3.1 With immediate effect, all thesis/dissertation/project report submission must include the originality report for the thesis/dissertation/project report generated by Turnitin. This includes thesis/dissertation (for postgraduate programmes) re-submission and/or re-examination.

3.2 Parameters of originality required and limits approved by UTAR are as follows:

(i) Overall similarity index is **20% and below** *(see examples in Appendix 1-1)*, and

(ii) Matching of individual sources listed *(see examples in Appendix 1-2)*
   (a) must be **less than 1% each** (for thesis/dissertation/project report of postgraduate programmes),
   (b) must be **less than 3% each** (for Final Year Project report of undergraduate programmes), and

(iii) Matching texts in continuous block must **not exceed 8 words**

*Note: Parameters (i) – (ii) shall exclude quotes, bibliography and text matches which are less than 8 words.*

3.3 Supervisors/instructors are required to review the originality report and to ensure the limits in 3.2 (i) – (iii) are adhered to, and also to check the detailed Turnitin originality report to make sure there is no plagiarism before endorsing the originality report by signing the prescribed form *(see Appendix 1-3 or Appendix 1-4)*.

4. Explanation on Filters and Settings

**Setting 1 : To generate originality report for submission**

Choose **Yes** in the ‘Generate Originality Reports for submission’ setting.
Setting 2: To exclude reference list from the Similarity Index

Choose Yes in the ‘Exclude bibliographic materials from the Similarity Index for this thesis’ setting. This setting cannot be changed once students begin to submit their papers. Again, this setting cannot be changed once student has submitted the thesis/dissertation/project report.

Setting 3: To exclude quoted materials from the Similarity Index

If student had used quotes and cited correctly, Turnitin can be set to automatically exclude text that appears between quotes (double " at the beginning and end of the passage) so that these portions of the thesis/dissertation/project report will not be included in the Similarity Index. This setting is enabled by choosing Yes in the ‘Exclude quoted materials from the Similarity Index for uploaded thesis’ setting. This setting cannot be changed once student has submitted the thesis.

Setting 4: To exclude text strings of a specified length from the Similarity Index

Some text strings of a specified length (e.g. 4 - 8 words), such as specific headings or terms or phrases, appear frequently in thesis/dissertation/project report. It is sometimes useful to exclude these text strings. This setting is enabled by choosing Yes and to type 8 in the box to exclude text matches which do not exceed 8 words.
Setting 5: Allowing student to see the Originality Report

In general, students should be allowed to view the Originality Report generated for the thesis/dissertation/project report submitted. However, supervisors and students should be aware that the similarity index alone cannot determine plagiarism. A similarity index is simply a guide to help us identify suspicious works and similar passages with other sources that the student has forgotten to cite. A thesis/dissertation/project report with a high similarity index needs to be reviewed and further analysed by the supervisor(s) together with the student in order to come to an informed judgment on whether plagiarism had occurred.

Setting 6: Turnitin database options

In general, faculty/institute would decide whether or not to have the student’s final work submission to be deposited in Turnitin repository. In so doing, Turnitin recognises that the IP of the original work in the thesis/dissertation/project report submitted belongs to this student. This ensures that the same work cannot be submitted by another student in future without citing the source, as to do so would result in detection of plagiarism.

However, for initial drafts/assignments and in some instances, it would be appropriate to select ‘no repository’ so that the system will not check against the previous draft of the student.

Setting 7: Search options

For each submission, the supervisor can determine the types of sources that each student’s thesis/dissertation/project report will be matched against when the Originality Report is generated.

(i) Selecting “current and archived internet and periodicals, journals & publications” will ensure detection on cases of copying & pasting from online sources.
(ii) Selecting all sources, you will also find that some sources that are not available online may still be matched if another user has copied the original source, these will appear as matches to another student’s paper from another institution.

In some instances it may be appropriate to limit the sources for matching.

5. **Explanation on Changing Email Address**

After supervisor/lecturer/instructor had created/enrolled an account for student in Turnitin, Turnitin system will send email notification to the student at UTAR student email address [xxxxx@1utar.my].

For student who is still using the old student email address [xxxxx@mail2.utar.edu.my], he/she is required to change to the new student email address (@1utar.my) as follows:

(i) Login to student portal [https://portal.utar.edu.my/loginPage.jsp](https://portal.utar.edu.my/loginPage.jsp)

(ii) After login, there will be a pop up box directing you to change to new address.

(iii) At the end, Username and Password for (@1utar.my) will be same as (@mail2.utar.edu.my)
Example 1 Summary Page of Originality Report with Listing of Similarity from Individual Sources which is less than 1% each

Turnitin Originality Report

Final Thesis by xxxxxxxxx
From Final Thesis (For submission) (Master Thesis)

Processed on 01-Jun-2013 00:06 MYT
ID: 333881080
Word Count: 41262

<table>
<thead>
<tr>
<th>Similarity Index</th>
<th>Similarity by Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>9%</td>
<td>Internet Sources: 6%</td>
</tr>
<tr>
<td></td>
<td>Publications: 5%</td>
</tr>
<tr>
<td></td>
<td>Student Papers: 4%</td>
</tr>
</tbody>
</table>

Sources:

1. < 1% match (Internet from 16-Jul-2008)
   [Link](http://www.toa.crc/studies.nsw.edu.au/syllabus_hsc.pptx.doc/appendix_quart_analysis_cr.doc

2. < 1% match (Internet from 24-Apr-2012)
   [Link](http://academics.georgasouthern.edu/jspvit3n1/articles/PDFs/Article_MeltonGrafGhoark-Foss.pdf

3. < 1% match (Internet from 01-May-2010)
   [Link](http://www.cdi.ca/~brmart/0_ARTICLES/Mayer_street_02.pdf

4. < 1% match (Internet from 12-May-2009)
   [Link](http://www.scd.gov.hk/FileManager/E-NContent_5520/devl%20c%20d%20c%20ch%20e%20nn%20c%20n%20c%20e%20p%20t.pdf

5. < 1% match (publications)

6. < 1% match (Internet from 10-Jan-2013)
   [Link](http://www.taiwanese-socrates.com/chinese_language_is_difficult.html

7. < 1% match (publications)
   Zafidin Yildirim. "Comparison of Hypermedia Learning and Traditional Instruction on Knowledge Acquisition and Retention", The Journal of Educational Research, 03.01.2001

8. < 1% match (Internet from 31-May-2012)

9. < 1% match (Internet from 03-Aug-2010)
   [Link](http://www.sagepub.com/upm-data/16104_Chapter_2.pdf

10. < 1% match (publications)
    Mareba Anic and Ali Asgar Alibermajid. "The Effect of Cooperative Reading Strategies on
Example 2 Summary Page of Originality Report with Listing of Similarity from Individual Sources which is more than 1% each

<table>
<thead>
<tr>
<th>Turnitin Originality Report</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final Thesis by xxxxxxxx</td>
</tr>
<tr>
<td>From Final Thesis (For submission) (Master Thesis)</td>
</tr>
<tr>
<td>Processed on 02-Apr-2013 19:10 MYT</td>
</tr>
<tr>
<td>ID: 317183599</td>
</tr>
<tr>
<td>Word Count: 28396</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Similarity Index</th>
<th>Similarity by Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>5%</td>
<td>Internet Sources: 3%</td>
</tr>
<tr>
<td></td>
<td>Publications: 3%</td>
</tr>
<tr>
<td></td>
<td>Student Papers: 0%</td>
</tr>
</tbody>
</table>

sources:

1. 2% match (Internet from 10-Apr-2009)
   http://www.mechanicalengineering.com/mechanical-engineering-archives/191-electric-explained-technology-vehicle.html

2. 2% match (publication)

3. 2% match (Internet from 09-Oct-2012)
   http://hybridcarsreview.com/11591/electric-vehicle-intelligent-control-system-over.html

paper text:

CHAPTER 1 INTRODUCTION 1.1 Introduction to CPS The Contour Positioning System (CPS) works by extracting road contour distance (in km) and elevation heights (in meters) data from Google Earth’s elevation profile and calculates them to produce the road contour slope angles (in degrees). Using software, some programming and formulas, these parameters obtained can be used to provide an estimation of the amount of battery energy needed. For example, this system will indicate to the user that driving 100km from point A to point B requires 50% of the EV’s battery energy. Therefore, the user will know if the remaining battery energy is enough to reach the desired destination. This system is accurate and unique because it includes the road slope angles which drains different amount of battery energy depending on the degree of the slope. For example, driving up a hill for 100km in a 10% slope uses a lot more battery energy compared to driving 100km on a normal 5% straight highway. Both data collections and real-time validations were done using the latest Proton Saga EV specifications and technical data to clarify the experimental results. The new Saga EVs are the ones sent by Proton to the Malaysian government for the test fleet. A total of three Proton Saga EVs were sent for field testing and expected to be commercialised in Malaysia (Berrama, 2011). By performing a series of battery capacity calculations, CPS can provide higher precision of remaining battery capacity for reaching a desired destination, making it an accurate battery energy estimation system for an EV compared to the current distance estimation system available in the market which could not tell the difference between moving 10 km uphill and 10km on a straight road. CPS can be integrated into current GPS to provide an indication and suggestion to the nearest charging station when the battery energy is
Appendix 1-2

Matching texts in continuous block of less than 8 words

are necessary to produce accurate distance estimation results. Therefore during the early stage of the CPS research, a few software to carry out the tasks mentioned above was recommended such as Python programming, Microsoft Access, Mathematica, C++ programming, Matlab programming, Advanced Vehicle Simulator (ADVISOIR) etc. ADVISOIR

2is an Advanced Vehicle Simulator that simulates the performance of hybrid electric, conventional, electric, and fuel cell vehicles.

Matching texts in continuous block of more than 8 words

It is important that the principles behind the design of electric vehicles and the relevant technological and environmental issues are thoroughly understood (Larminie et al., 2012). The table below shows some of the common electric vehicles that are available in the market and some of the common characteristics that they have. All the EVs listed in the table below runs on lithium-ion battery packs to produce an accurate and compatible comparison between one to the other.

Table 2.1: Electric vehicles running on lithium-ion battery specifications

<table>
<thead>
<tr>
<th>Electric Vehicle</th>
<th>Range (km)</th>
<th>Energy Density (Wh/kg)</th>
<th>Weight (kg)</th>
<th>Battery Weight Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proton Saga EV</td>
<td>120</td>
<td>15.9</td>
<td>105</td>
<td>1,148</td>
</tr>
<tr>
<td>Nissan Leaf</td>
<td>160</td>
<td>24.1</td>
<td>140</td>
<td>1,535</td>
</tr>
<tr>
<td>Mitsubishi i-MiEV</td>
<td>100</td>
<td>160</td>
<td>160</td>
<td>1,717</td>
</tr>
<tr>
<td>Tesla Roadster</td>
<td>394</td>
<td>121</td>
<td>449</td>
<td>1,235</td>
</tr>
<tr>
<td>BMW Mini E</td>
<td>160</td>
<td>35</td>
<td>135</td>
<td>1,465</td>
</tr>
<tr>
<td>Ford Focus EV</td>
<td>122</td>
<td>230</td>
<td>100</td>
<td>1,674</td>
</tr>
</tbody>
</table>

The table shows that high-performance electric vehicles such as Tesla Roadster and BMW Mini E have lower energy density compared to other compact models. The lower energy density of these models can be attributed to their lightweight design, which is crucial for achieving high performance.

Since the late 1980s rechargeable lithium cells have come onto the market. They offer greatly increased energy density in comparison with other rechargeable batteries, though at greatly increased cost. It is a well-established feature of the most expensive laptop computers and mobile phones that lithium rechargeable batteries are specified, rather than the lower cost NiCad or NiMH cells that we have been considering earlier. Lithium-ion (lithium-ion) batteries are projected to become the most popular battery for plug-in and full-battery electric vehicles (PHEVs and BEVs). While other types of batteries, including lead-acid and nickel-metal hydride (in the first generation of the Toyota Prius hybrid) will continue to retain considerable market share in the short term,
### INSTITUTE OF POSTGRADUATE STUDIES AND RESEARCH

<table>
<thead>
<tr>
<th>Full Name of Candidate</th>
<th>Supervisor’s Comments (Compulsory if parameters of originality exceeds the limits approved by UTAR)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Overall similarity index: _____ %</td>
</tr>
<tr>
<td></td>
<td>Similarity by source</td>
</tr>
<tr>
<td></td>
<td>Internet Sources: _____ %</td>
</tr>
<tr>
<td></td>
<td>Publications: _____ %</td>
</tr>
<tr>
<td></td>
<td>Student Papers: _____ %</td>
</tr>
<tr>
<td></td>
<td>Number of individual sources listed of more than 1% similarity: __________</td>
</tr>
</tbody>
</table>

Parameters of originality required and limits approved by UTAR are as follows:

(i) Overall similarity index is 20% and below, and
(ii) Matching of individual sources listed must be less than 1% each, and
(iii) Matching texts in continuous block must not exceed 8 words

*Note: Parameters (i) – (ii) shall exclude quotes, bibliography and text matches which are less than 8 words.*

Based on the above results, I hereby declare that I am satisfied with the originality of the Dissertation/Thesis/Project Report submitted by my student as named above.

---

Signature of Supervisor: __________________________
Name: __________________________
Date: __________________________

Signature of Co-Supervisor: __________________________
Name: __________________________
Date: __________________________
Appendix 1-4

Universiti Tunku Abdul Rahman
Form Title: Supervisor’s Comments on Originality Report Generated by Turnitin for Submission of Final Year Project Report (for Undergraduate Programmes)
Form Number: FM-IAD-005    Rev No.: 0    Effective Date: xx/xx/xxxx    Page No.: 12 of 1

FACULTY OF ________________________________________________

Full Name(s) of Candidate(s) ____________________________________
ID Number(s) ________________________________________________
Programme / Course ____________________________________________
Title of Final Year Project _______________________________________

Similarity

Overall similarity index: ______ %

Similarity by source
Internet Sources: ______ %
Publications: ______ %
Student Papers: ______ %

Number of individual sources listed of more than 3% similarity: _______

Parameters of originality required and limits approved by UTAR are as follows:
(i) Overall similarity index is 20% and below, and
(ii) Matching of individual sources listed must be less than 3% each, and
(iii) Matching texts in continuous block must not exceed 8 words

Note: Parameters (i) – (ii) shall exclude quotes, bibliography and text matches which are less than 8 words.

Based on the above results, I hereby declare that I am satisfied with the originality of the Final Year Project Report submitted by my student(s) as named above.

__________________________________ ________________________________
Signature of Supervisor Name: _________________________
Date: _______________________

__________________________________ ________________________________
Signature of Co-Supervisor Name: _________________________
Date: _______________________

Note: Supervisor/Candidate(s) is/are required to provide softcopy of full set of the originality report to Faculty/Institute.