Have I Got News for You:
an Introduction to Research Skills

Dr. Oliver Ray

https://www.cs.bris.ac.uk/~oray/
csxor@bristol.ac.uk

30th September 2016
“Students today depend upon paper too much. They don’t know how to write on a slate without getting chalk dust all over themselves. They can’t clean a slate properly. What will they do when they run out of paper?”

*Principals Association, 1815*

Degrees of Freedom

- human knowledge
- knowledge of competent professionals
- primary school
- secondary school
- Bachelors degree
- MSc taught component
- MSc research skills
- MSc project
- PhD
How to become a Master?

Masters degrees are awarded to students who have demonstrated:

i. a systematic understanding of knowledge, and a critical awareness of current problems and/or new insights, much of which is at, or informed by, the forefront of their academic discipline, field of study, or area of professional practice;

ii. a comprehensive understanding of techniques applicable to their own research or advanced scholarship;

iii. originality in the application of knowledge, together with a practical understanding of how established techniques of research and enquiry are used to create and interpret knowledge in the discipline;

iv. conceptual understanding that enables the student:
   • to evaluate critically current research and advanced scholarship in the discipline; and
   • to evaluate methodologies and develop critiques of them and, where appropriate, to propose new hypotheses.

Typically, holders of the qualification will be able to:

a) deal with complex issues both systematically and creatively, make sound judgements in the absence of complete data, and communicate their conclusions clearly to specialist and nonspecialist audiences;

b) demonstrate self-direction and originality in tackling and solving problems, and act autonomously in planning and implementing tasks at a professional or equivalent level;

c) continue to advance their knowledge and understanding, and to develop new skills to a high level; and will have:

d) the qualities and transferable skills necessary for employment requiring:
   • the exercise of initiative and personal responsibility;
   • decision-making in complex and unpredictable situations; and
   • the independent learning ability required for continuing professional development.
Health Warning!

Computer Science MSc Individual Project

Note that the price of attaining intellectual freedom is that some of you are going to struggle with the idea of taking responsibility for your own work, setting your own goals, posing your own questions, defining your own success criteria, risking failure, dealing with changing and ambiguous information, learning to self-study and becoming an expert in your own right - as this may well go against everything you've been trained to do educationally and culturally up until this point in your life!
# CS MSc Project Timeline

<table>
<thead>
<tr>
<th>SEP</th>
<th>OCT</th>
<th>NOV</th>
<th>DEC</th>
<th>JAN</th>
<th>FEB</th>
<th>MAR</th>
<th>APR</th>
<th>MAY</th>
<th>JUN</th>
<th>JUL</th>
<th>AUG</th>
<th>SEP</th>
</tr>
</thead>
<tbody>
<tr>
<td>19</td>
<td>26</td>
<td>3</td>
<td>10</td>
<td>17</td>
<td>24</td>
<td>5</td>
<td>12</td>
<td>19</td>
<td>26</td>
<td>2</td>
<td>9</td>
<td>16</td>
</tr>
<tr>
<td>23</td>
<td>30</td>
<td>6</td>
<td>13</td>
<td>20</td>
<td>27</td>
<td>19</td>
<td>26</td>
<td>2</td>
<td>9</td>
<td>16</td>
<td>23</td>
<td>30</td>
</tr>
<tr>
<td>2</td>
<td>9</td>
<td>16</td>
<td>23</td>
<td>30</td>
<td>6</td>
<td>13</td>
<td>20</td>
<td>27</td>
<td>19</td>
<td>26</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>17</td>
<td>24</td>
<td>5</td>
<td>12</td>
<td>19</td>
<td>26</td>
<td>2</td>
<td>9</td>
<td>16</td>
<td>23</td>
<td>30</td>
<td>6</td>
<td>13</td>
</tr>
<tr>
<td>4</td>
<td>11</td>
<td>7</td>
<td>14</td>
<td>21</td>
<td>28</td>
<td>7</td>
<td>14</td>
<td>21</td>
<td>28</td>
<td>4</td>
<td>11</td>
<td>7</td>
</tr>
</tbody>
</table>

**WK**

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

**CV**

1 2 3 1 2 13 14 15 16 17 18 19 20 21 22

**JE**

1 2 3 1 2

**EV**

1 2 3 23 24

**SV**

1 2 3 4 23 24

**RE**

1 2 3 4

**SE**

1 2 3 4

**Extended abstract**

- Analyse example theses
- Propose your own ideas
- Find a supervisor
- Peer feedback

**Preliminary work**

- Review Outline
- Research skills topics
- Poster

**Mini-poster showcase**

- Peer marking
- Research review

**Poster**

- Start project
- Formal progression

**Thesis**

- Poster / Demo

**60CP@15Wk=40hrs/wk**

- Monday 24/04/17 2pm
- Monday 01/05/17 2pm

- Friday 31/03/17 10-11am
- Friday 24/03/17 2pm

**interrupt project?**

- Monday 13/02/17 2pm
- Monday 10/12/16 2pm

**extended?**

- extended: 08/12/16
- extended: 23/12/16

**Friday 15/09/17 2pm**

- Friday 01/09/17 am/pm
Your task is to read and rank the following three MSc theses:


Notes:

- Be prepared to justify your ranking as we will discuss your conclusions at the beginning of the next lecture.
- I have deliberately not specified any criteria because I want you to focus on what YOU think is a good project, and why.
- The next lecture will look more closely at the project marking criteria (which will become the basis of all your project work going forwards)