



NTU-H3 Science Research Evaluation Rubric Assessment Form for Research Process

FORM A

Name of Student : _____

Project Code & Title : _____

Name of Assessor : _____ **Signature & Date** : _____

Assessment is based on observations of the student at work.

Components	Outstanding 4	Good 3	Average 2	Below Average 1	Score* (1-4)
(A) Initiative	<ul style="list-style-type: none"> • Very self-directed • Contributed significantly to project planning 	<ul style="list-style-type: none"> • Needs mentor's leadership • Mentor can count on student to follow through 	<ul style="list-style-type: none"> • Mentor must sometimes remind student to keep on-task 	<ul style="list-style-type: none"> • Rarely focuses on the task and on what needs to be done 	
(B) Keeping to Schedule	<ul style="list-style-type: none"> • All deadlines are met 	<ul style="list-style-type: none"> • Most deadlines are met 	<ul style="list-style-type: none"> • Deadlines are met with a little prompting 	<ul style="list-style-type: none"> • Work is generally late or missing even with prompting 	
(C) Interpersonal Effectiveness	<ul style="list-style-type: none"> • Works well with mentor and others 	<ul style="list-style-type: none"> • Able to work with mentor and others 	<ul style="list-style-type: none"> • Able to work with mentor and others with occasional difficulties 	<ul style="list-style-type: none"> • Able to work with mentor and others but with great difficulties 	
(D) Attitude	<ul style="list-style-type: none"> • Shows great interest and commitment all the time 	<ul style="list-style-type: none"> • Shows interest and commitment most of the time 	<ul style="list-style-type: none"> • Inconsistent interest and commitment 	<ul style="list-style-type: none"> • Not interested and not committed 	
(E) Inquisitiveness	<ul style="list-style-type: none"> • Asks challenging and relevant questions all the time 	<ul style="list-style-type: none"> • Asks relevant questions most of the time 	<ul style="list-style-type: none"> • Asks questions occasionally 	<ul style="list-style-type: none"> • Hardly asks questions 	
(F) Problem-Solving Skills	<ul style="list-style-type: none"> • Provides effective solutions to problems most of the time 	<ul style="list-style-type: none"> • Provides effective solutions to problems at times 	<ul style="list-style-type: none"> • Seldom provides effective solutions 	<ul style="list-style-type: none"> • Never provides effective solutions 	
(G) Keeping Records	<ul style="list-style-type: none"> • Well-documented and organised • Essential information is kept in a well-organised written format • Strong evidence of individual insights and reflection 	<ul style="list-style-type: none"> • Fairly well-documented and organised • Essential information is kept in a fairly easy to follow format • Some evidence of individual insights and reflection 	<ul style="list-style-type: none"> • Only some portions are well-documented and organised • Little evidence of individual insights and reflection 	<ul style="list-style-type: none"> • Incomplete documentation • No evidence of individual insights and reflection 	
<p>* Please give only integer scores from 1 to 4.</p>					TOTAL



NTU-H3 Science Research Evaluation Rubric Assessment Form for Research Paper

FORM B
Name of Student : _____

Project Code & Title : _____

Name of Assessor : _____ **Signature & Date** : _____

Assessment is based on the Research Paper submitted by the student.

Components	Outstanding 4	Good 3	Average 2	Below Average 1	Score* (1-4)
(A) Background Information and Clarity in Objectives Set	<ul style="list-style-type: none"> • Uses authoritative resources • Makes critical assessment • All objectives are clearly defined 	<ul style="list-style-type: none"> • Uses mainly authoritative resources • Makes some critical assessment • Some objectives are clearly defined 	<ul style="list-style-type: none"> • Uses some authoritative resources • Makes occasional critical assessment • Some objectives are clearly defined 	<ul style="list-style-type: none"> • No background research • Lacks critical assessment • Objectives are poorly defined 	
(B) Experimental Design	<ul style="list-style-type: none"> • Innovative and valid experiments • All sources of errors considered • All important variables controlled 	<ul style="list-style-type: none"> • Valid experiments • Most sources of errors considered • Important variables controlled 	<ul style="list-style-type: none"> • Average experimental design • Some sources of errors considered • Few variables controlled 	<ul style="list-style-type: none"> • Poor experimental design • Sources of errors hardly considered • Little or no control of variables 	
(C) Data Collection and Processing	<ul style="list-style-type: none"> • Excellent sample set • High level of accuracy and precision • Excellent scientific data processing 	<ul style="list-style-type: none"> • Good sample set • Some concern for accuracy and precision • Good scientific data processing 	<ul style="list-style-type: none"> • Average sample set • Little concern for accuracy and precision • Some evidence of scientific data processing 	<ul style="list-style-type: none"> • Insufficient sample set • No concern for accuracy and precision • No evidence of scientific data processing 	
(D) Discussion and Conclusion	<ul style="list-style-type: none"> • Coherent, logical and organised discussion of the results • Appropriate conclusions • Able to recommend future research / studies with thought given to possible further refinement 	<ul style="list-style-type: none"> • Logical and organised discussion of the results • Appropriate conclusions • Able to recommend possible future research / studies 	<ul style="list-style-type: none"> • Somewhat logical and organised discussion of the results • Some appropriate conclusions • Some suggestions of possible future research / studies but they may not be relevant 	<ul style="list-style-type: none"> • Flaws and discontinuity in discussions of the results • Inappropriate conclusions • No suggestions of future research / studies 	
(E) Paper Writing	<ul style="list-style-type: none"> • Paper is written with a high degree of clarity and precision • Effective use of scientific notations, references, figures, figure captions etc. • All sources are properly cited 	<ul style="list-style-type: none"> • Paper is written with a considerable degree of clarity and precision • Appropriate use of scientific notations, references, figures, figure captions etc. • Most sources are properly cited 	<ul style="list-style-type: none"> • Paper is written with some degree of clarity and precision • Inconsistent use of scientific notations, references, figures, figure captions etc. • Some sources are properly cited 	<ul style="list-style-type: none"> • Paper shows only some evidence of clarity and precision • Hardly any use of scientific notations, references, figures, figure captions etc. • Most sources are not properly cited 	
(F) Originality and Creativity	<ul style="list-style-type: none"> • Highly original, novel and resourceful 	<ul style="list-style-type: none"> • Original with some novel ideas 	<ul style="list-style-type: none"> • Approach is above average 	<ul style="list-style-type: none"> • Routine approach 	
* Please give only integer scores from 1 to 4.					TOTAL



NTU-H3 Science Research Evaluation Rubric Assessment Form for Oral Presentation

FORM C

Name of Student : _____

Project Code & Title : _____

Name of Assessor : _____ Signature & Date : _____

Assessment is based on the oral presentation and oral defence by the student.

Components	Outstanding 4	Good 3	Average 2	Below Average 1	Score* (1-4)
(A) Effectiveness of Presentation materials	<ul style="list-style-type: none"> • Impressive presentation flow • Very effective use of IT / demonstrations / graphic tools 	<ul style="list-style-type: none"> • Good presentation flow • Effective use of IT / demonstrations / graphic tools 	<ul style="list-style-type: none"> • Average presentation flow • Some use of IT / demonstrations / graphic tools 	<ul style="list-style-type: none"> • Poor presentation flow • No use of IT / demonstrations / graphic tools 	
(B) Communication Skills	<ul style="list-style-type: none"> • Very systematic and coherent • Very clear and comprehensive • Keeps very good timing 	<ul style="list-style-type: none"> • Systematic and coherent • Clear and comprehensive • Keeps to the time 	<ul style="list-style-type: none"> • Systematic • Lacks clarity and comprehensiveness • Slightly over or under run the time 	<ul style="list-style-type: none"> • Not systematic • Lacks clarity and comprehensiveness • Poor time management 	
(C) Content	<ul style="list-style-type: none"> • Good background information • Very rational experimental/ theoretical design • Solid results • Logical and consistent conclusions 	<ul style="list-style-type: none"> • Sufficient background information • Rational experimental/ theoretical design • Sufficient results • Logical conclusions 	<ul style="list-style-type: none"> • Some background information • Average experimental/ theoretical design • More results required 	<ul style="list-style-type: none"> • Little background information • Poor experimental /theoretical design • Insufficient results • Unsubstantiated conclusions 	
(D) Response to Questions	<ul style="list-style-type: none"> • Able to answer all questions with good reasoning and logic • Shows great confidence 	<ul style="list-style-type: none"> • Able to answer most questions with good reasoning and logic • Shows confidence 	<ul style="list-style-type: none"> • Able to answer some questions • Shows average confidence level 	<ul style="list-style-type: none"> • Not able to answer most questions • Shows poor confidence 	
(E) Demonstration of Knowledge Acquired	<ul style="list-style-type: none"> • Demonstrates excellent ability to apply the acquired knowledge to a real or hypothesised situation 	<ul style="list-style-type: none"> • Demonstrates good ability to apply the acquired knowledge to a real or hypothesised situation 	<ul style="list-style-type: none"> • Demonstrates average ability to apply the acquired knowledge to a real or hypothesised situation 	<ul style="list-style-type: none"> • Demonstrates no ability to apply the acquired knowledge to a real or hypothesised situation 	
<p>* Please give only integer scores from 1 to 4.</p>					<p>TOTAL</p>