



## Techniques for Writing and Publishing a Better Research Article

**Subtitle:** A guide to writing a better-quality research article for potential publication in a good quality journal.

### 1.0 Course Faculty Information

Name: Prof. Dr. M. Enamul Hossain  
NSRIC Chair Professor in Sustainable Energy  
NSRIC Inc., Toronto, Ontario, Canada

### 2.0 Course Information

Course(s) Codes	EDU-P-C00399
Class Days	Follow posting in NSRIC LMS system
Class Time	Follow posting in NSRIC LMS system
Course Credit Hours	1
Class Location	NSRIC online platform
Prerequisites and/or co-requisites	n/a
Level /A, E, H, I, K12, M, P, S, T, U, V, W	P

**Note:** The below classification of courses is related to any areas of knowledge:

**A:** Advanced level academic level courses; **C:** Canadian immigration and training courses; **E:** Executive courses; **H:** Higher-level courses (i.e., graduate courses); **I:** Intermediate courses (i.e., university preparatory courses – Grade XII+); **K12:** Foundational, and lower-level courses; **M:** Mid-level courses (i.e., undergraduate courses); **P:** Professional courses; **S:** Short/seminar courses; **T:** Training courses; **U:** Tutorial Courses; **V:** Vocational training courses; and **W:** Workshop courses.

### 3.0 Professor Information

Name	Prof. Dr. M. Enamul Hossain
Title	NSRIC Chair Professor in Sustainable Energy
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Office Location	NSRIC online platform
Office Hours	10: 30 am – 11:30 am EST (Monday) by email appointment

### Our Specializations:

1. **ADK:** to create different avenues and opportunities for the **Acquisition and Dissemination of Knowledge**.
2. **BDM:** to create **Business Development and Marketing** relationships for the growth of the institution.
3. **CPS:** to facilitate **Cybersecurity Products and Services** and cybersecurity hands-on training for our students.
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## 4.0 Target Audiences

- Any students who are interested in writing an article.
- Any researcher, scientist, educator, student, and interested reader in any discipline.
- University graduates, early career researchers, scientists, professionals, and mentors.
- Any undergraduate and graduate student who is interested in writing research articles.

## 5.0 Course Description

Through this course, the audience will learn the essential concepts and requirements for writing a research article in any field of study. Through clear lecture notes, live sessions, learning activities, understanding questions, research articles, concepts, theory, and real-world examples are combined to achieve a cohesive understanding.

Research and publications are essential parts of filling the knowledge gap and advancing education; thus, new knowledge advances require the use of publications. The manuscript should be accurate, valid, high-quality, reproducible, and applicable. The journals aim to publish good-quality research manuscripts for improving the journal impact factor. As a result, journals always look to publish research articles with scientific contributions and good writing. This course offers an understanding of logical and structural techniques, skills, research types, and research methodologies. In addition, it covers the structure of a research paper, post-research activities, publishing options, and the selection of journals.

It is essential to follow the basic principles of scientific research and publishing. Then, improve the quality of the manuscript followed by the guidelines presented in this course. Everyone wants to publish his/her research in a good journal. To achieve that, researchers must first produce good-quality articles through innovative research, which is challenging. To be successful, there are specific essential requirements that need to be completed. The course covers all loopholes in detail so that the article is ready for publication in a good journal.

This course is a resource guide and an excellent source for students, early and experienced researchers, scientists, academicians, and executives who want to learn concepts, key parameters, and criteria to fulfill the requirements of writing a better manuscript. The course contains 15 lectures, including a research project, each comprising 20 to 36 PowerPoint presentation slides and PDF documents. The course is also designed with four quizzes. A certificate of completion will be awarded to the participant.

**Keywords:** writing structure, journal impact, peer review, publishing, writing skills, citation counts, the h-index, journal impact factors, main theme, title, abstract, introduction, literature, results, discussion, conclusions, acknowledgement, reference, appendix, and checklist.

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## 6.0 Course Learning Outcomes

Students who complete this course can achieve the following course learning outcomes (CLOs):

### Module I

CLO1: Understanding the requirements for writing a better research article.

CLO2: Ability to identify the logic and structure of a better research article.

CLO3: Understanding the process of mapping and structuring a better research article.

CLO4: Ability to identify the qualities that make a research paper better and effective.

CLO5: Being able to know what to write in every section of an impactful manuscript.

CLO6: Familiarize yourself with the selection criteria for choosing where to publish.

CLO7: The ability to comprehend, follow, and implement the article checklist to create a superior research article.

## 7.0 How the course supports the attainment of student outcomes

Student Learning Outcomes (1-6)						
1	2	3	4	5	6	7
Moderate	Moderate	Moderate	Low	Moderate	Moderate	Excellent

## 8.0 Course Materials

### Online course materials

- Online presentation documents in PDF form.
- Audio/visual recording of lectures (Optional).
- Online tutorials and meetings with students upon request.
- Quizzes in the forms of True/False and MCQs for evaluation at the NSRIC online MLS system
- A project for the course completion
- Reading materials, if any, in pdf form

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## 9.0 Academic Integrity

Students are encouraged to have a look at the NSRIC's statement of academic integrity on the NSRIC website. It is noted that by signing this syllabus, you will acknowledge that you have understood that any detected plagiarism should be reported.

## 10. Assessment for Grade

This course is a professional course not an academic course (i.e., K12, and university level courses). Therefore, there will not be any assessment based on individual and team performance as shown in Table 1. However, the course contains four quizzes and assignments to make the assessment. Students will receive a "*Certificate of completion*" after successful completion of the course.

**Table 1:** NSRIC grading system.

Type of Assessment	Grade %
Participation/Engagement/Performance	10%
Assignments	0%
Quizzes	20%
Research Project	70%
<b>Total</b>	<b>100%</b>

### Important Note:

- i) The below classified courses (i.e., academic courses) will only be evaluated based on the grade system shown in Table 2. A grade and certificate will be issued for the student(s) and participant(s).  
A: Advanced level academic level courses; H: Higher-level courses (i.e., graduate courses); I: Intermediate courses (i.e., university preparatory courses – Grade XII+); K12: Foundational, and lower-level courses; M: Mid-level courses (i.e., undergraduate courses).
- ii) The below-classified courses will **not** be evaluated based on the grading system shown in Table 2. A certificate will be issued for the student(s) and participant(s).

E: Executive courses; P: Professional courses; S: Short/seminar courses; T: Training courses; U: Tutorial Courses; V: Vocational training courses; and W: Workshop courses.

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## ***Participation/Engagement/Performance***

Your participation in every aspect of the course is important for the learning process. Your engagement in every discussion in the course, and due delivery of all practices will be fruitful. These efforts from your side will reflect your performance in the course delivery and your commitments. This performance is the reflection of your dream grade!!

At the end of the term, below Table 2 will be used for translating your marks into a “Letter Grade” based on the NSRIC grading policy.

## **11.0 Advice and additional requirements**

### ***I advise you to:***

- Please contact me if you need any help.
- Students are expected to attend all scheduled online lecture classes.
- Students are expected to study from the course materials and/or textbooks which will help to easily read and understand.
- Students are encouraged to write their own notes during lectures/presentations (pdf PowerPoint presentations, and additional materials if any).
- Students are encouraged to attend online platform classes on time because late attendee disrupts the flow of the class for both the instructor and the other students.

**Table 2:** NSRIC grading system.

Marks	Letter Grade	Points	Description
≥ 93	A+	4.00	Outstanding
≥ 90	A	3.75	
≥ 87	A-	3.50	Excellent
≥ 84	B+	3.25	Very good
≥ 81	B	3.0	
≥ 78	B-	2.75	Moderately Good
≥ 75	C+	2.50	Good
≥ 72	C	2.25	
≥ 69	C-	2.0	Moderately Good
≥ 66	D+	1.75	Pass
≥ 63	D	1.50	
≥ 60	D-	1.25	Poor Pass
< 60	F	0	Failing

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## *Additional information (During the Online Course offering Period)*

- The PowerPoint course materials and video lectures will be available on the NSRIC Platform.
- There will be scheduled discussion/tutorial sessions based on the request at the class scheduled time. All students must attend this session (Need the student's email request).
- There will be an office hour for students on Monday from 10:30 am to 11:30 am EST (Toronto, Canada time). Students need to send an email request so that a Zoom meeting can be arranged. In addition, any time students can set up an online appointment (i.e., phone, zoom, or other mode of communication) based on the availability of the course instructor. However, students should request an email to set up this type of meeting.

## 12.0 Course Topics

- An introduction
- Important skills and steps for writing a better research article.
- Characteristics and types of research methodologies
- Anatomy of writing a research article
- Article checklist.
- Strategic plan and submission for publications
- Where to publish your article

## Requirements/Instructions

Students are advised to register for all drilling engineering modules courses to become a master in the subject area.

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## 13.0 Course Contents and Schedule

Lec. No.	Module	Topics	Remarks
<b>Module I</b>			
01	Introduction	Course details and introduction of a better research article writing	
02	Types and steps	Types and steps of a better research article	
03	Seven skills	Seven important skills for a better research article	
04	Steps	Steps for a better research article	
05	Characteristics	Characteristics and types of research methodologies	Quiz 1
06	Anatomy	Anatomy of writing a research article 1	
07	Anatomy	Anatomy of writing a research article 2	Quiz 2
08	Anatomy	Anatomy of writing a research article 3	
09	Anatomy	Anatomy of writing a research article 4	
10	Anatomy	Anatomy of writing a research article 5	Quiz 3
11	Post-writing	Post-writing tasks and checklist	
12	Plan	Strategic plan and submission for publications	
13	Publishing	Where to publish the article and feedback	
14	Project	Guideline on course project	Quiz 4
15	Example articles	Four review articles as example cases	
<b>Final Project – The manuscript submission date is within two weeks of the course completion</b>			

**Prepared** by Prof. M. Enamul Hossain, NSRIC Chair Professor in Sustainable Energy, Dept. of Petroleum Engineering, OE Division, NSRIC Inc., Toronto, ON, Canada.

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