

# **MAT 201: Numerical Methods**

## **Course Outline**

Shahadat Hussain Parvez

# Course Learning Outcomes

- Understand mathematical modeling
- Understand how computers compute complex mathematics like
  - Finding Roots
  - Integration
  - Differentiation
  - Regression
  - Interpolation
  - Solving Differential equations
- Understands different types of error

# Instructor Details

- **Instructor**

- Shahadat Hussain Parvez

- **Email**

- shparvez@neub.edu.bd

- **Office Location**

- Room no 303

- **Office Hours**

- 9:30 Am – 2:30 Pm,  
Saturday-Thursday

# Contacting me

- Try to contact me during office hours
- Preferable- email
- Contact me via mobile number if emergency
- Avoid calling on my mobile during night

# Required Texts

- Numerical Methods for Engineers - Steven C. Chapra, Raymond P. Canale (Chapra)

# Course Materials

- All the course materials (Including name for any new books) will be available at
  - <http://www.neub.shparvez.net/mat-201>
- Google Classroom will also be used to share materials and assign assignments
  - Class Code - **5j2izfw**

You are encouraged to follow the website, as I will be updating about assignments and tutorials there.

# Online Classes

- Zoom link:

<https://bdren.zoom.us/j/62194201557?pwd=RmZKZDFIRUQ5NkdTd3lFTU5tRDNWZz09>

- Meeting ID: 621 9420 1557
- Password: 062876

# Marking Policy

- Attendance : 10 marks
- Tutorial : 10 marks
- Assignment : 10 marks
- Mid Term : 30 marks
- Final : 40 marks

\*Marks distribution may change if online assessment is chosen.



# Attendance Policy

- Mark for attendance will be awarded as follows. No excuse or requests will be considered regarding late submission.

<b>Level of Attendance</b>	<b>Mark</b>
<b>96% to 100%</b>	10
<b>91% to 95%</b>	9
<b>86% to 90%</b>	8
<b>81% to 85%</b>	7
<b>76% to 80%</b>	6
<b>71% to 75%</b>	5
<b>66% to 70%</b>	4
<b>61% to 65%</b>	3
<b>60%</b>	2
<b>Below 60%</b>	0

# Assignment Policy

- Several Assignments (5-7) will be given throughout the semester.
- Assignments Must be submitted within due dates.
- No excuse or requests will be considered regarding late submission.
- Assignments may be online or offline.
- Assignments must be your own work.
  - If I suspect copy of any 2 assignments, I will provide negative markings for all submissions that match

# Other Policy

- Bunking of class will be severely penalized.
- Mass bunking during tutorials will result in zero marks for all students.
- Other than bunking, unusual distractions during lectures by any students will also be severely penalized.
- Any **Plagiarism** will be strongly **penalized**.
  - Small plagiarism can lead to fall of 2-3 grades.

# Online Class Rules

- Do not turn your microphone during my lectures.
- You will be periodically given time to ask question.
- If any questions arise in the meantime tell them in chat.
- I will try to record and upload lectures.
  - I cannot assure you that all lectures will be uploaded.
  - If you miss any class I am not liable to compensate for this.
- Class attendance will be taken as usual.

# Course Schedule

- Course Schedule will be updated on ongoing basis throughout the semester.
- Lecture List as per last update are
  - Lec 1 : Numerical methods and Errors
  - Lec 2 : Series and Sequence
  - Lec 3 : Bracketing methods for finding roots
  - Lec 4 : Open methods for finding roots
  - Lec 5 : Polynomials

# Course Schedule (Cont'd)

- Lecture List as per last update are
  - Lec 6 : Simultaneous Linear Algebraic Equations
  - Lec 7 : Numerical Integration
  - Lec 8 : Numerical Differentiation
  - Lec 9 : Iterative Methods
  - Lec 10: Regression [Not in syllabus]
  - lec 11: Interpolation
  - lec 12: Initial Value Problems

END