Advanced STEM Students

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Tóm tắt nội dung

This text is a part of the series *Some Topics in Advanced STEM & Beyond*:
URL: https://nqbh.github.io/advanced_STEM/.
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  TEX: URL: https://github.com/NQBH/advanced_STEM_beyond/blob/main/teach/student/NQBH_student.tex.
- .
  PDF: URL: .pdf.
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Mục lục

1 UMT Summer Semester 2025/1480: Introduction to Mathematical Analysis

1. Trần Thanh Cường.
   - Absence: -2.
   - Early attendance: 0.5 + 0.5 + 0.5 + 0.5.
   - Bonus:
2. Huỳnh Lâm Vũ Dình.
   - Early attendance: 0.5 + 0.5 + 0.5 + 0.5 + 0.5.
   - Bonus:
3. Trương Công Hoan.
   - Early attendance: 0.5 + 0.5 + 0.5 + 0.5 + 0.5.
   - Bonus:
4. Nguyễn Huy Hoàng [NHH].

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- Early attendance: 0.5 + 0.5 + 0.5 + 0.5 + 0.5.
- Bonus: 0.25 + 0.5 + 0.5 + 1 + 2 (count rooms) + 2 (build roads) + 2 (labyrinth) + 2 (message route) + 2 (Christmas party) + 0.5 + 1 (l'Hospital) + 1 (next prime) + 0.25 (weird alg) + 0.25 (repetition) + 0.25 (miss number) + 0.25 (increase array) + 0.5 (permutation) + 0.5 (2 sets) + 0.5 (Hanoi tower) + 0.5 (bee) + 0.5 (gold coin) + 0.5 (number spiral) + 0.25 (2 knights) + 0.5 (bit string) + 0.5 (trailing 0) + 0.5 (coin pile) + 0.25 (3n + 1) + 0.5 + 0.25 + 0.25 + 0.5 (create string).

5. Lữ Minh Hoàng.
   - Early attendance: 0.5 + 0.5 + 0.5 + 0.5 + 0.5.
   - Bonus:
6. Hà Quang Huy.
   - Early attendance: 0.5 + 0.5 + 0.5 + 0.5 + 0.5.
   - Bonus:
7. Nguyễn Bảo Khánh [NBK].
   - Early attendance: 0.5 + 0.5 + 0.5 + 0.5 + 0.5.
   - Bonus: 1 + 2 + 1 + 0.5 + 1 + 1.5 (l'Hospital) + 0.5 + 0.5.
8. Nguyễn Lê Đăng Khoa [NLDK].
   - Early attendance: 0.5 + 0.5 + 0.5 + 0.5.
   - Bonus: 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 (gift) + 1.5 + 0.25 + 0.5 (doubles) + 0.5 (prime) + 0.5 (houseboat) + 1 (red black) + 1 (count rooms) + 1 (dice) + 1 (min coin) + 1 (coin combination I) + 1 (coin combination II) + 1 (grid path I) + 1.5 (book shop) + 1 (exp I) + 1 (exp II) + 0.5 (count divisor) + 1 (common divisor) + 1.5 (Josephus queries) + 2 (sum divisor) + 0.75 (next prime) + 1 (binom coeff) + 1 (create string II) + 1 (distribute apple) + 1 (Christmas party) + 1.75 (l'Hospital) + 0.25 (weird alg) + 3 (permutation order) + 1.5 (meet middle) + 0.25 (repetition) + 0.25 (increase array) + 0.25 (permutation) + 0.25 (number spiral) + 0.25 (2 sets) + 0.25 (bit string) + 0.25 (trailing zeros) + 0.25 (palindrome reorder) + 0.25 (coin pile) + 0.25 (hangover) + sum (0.25) + 0.25 (humidex) + 0.25 (specialized 4-digit num) + 0.25 (quicksum) + 0.25 (Dirichlet) + 0.5 + 1 (circumference circle) + 1 (filled subgrid count I).
9. Phan Gia Lạc [PGL].
   - Early attendance: 0.5 + 0.5 + 0.5 + 0.5 + 0.5.
   - Bonus: 0.5 + 0.25 + 0.25 + 0.5 (doubles) + 0.5 (houseboat) + 0.5 (prime) + 1 (count room) + 1 (min coin) + 0.5 (count divisor) + 0.75 (next prime) + 1 (prime multiple) + 1 (binom coeff) + 1 (create string II) + 1 (distribute apple) + 1 (Christmas party) + 0.25 (bitstring) + 0.25 (gray code).
10. Phan Phương Phi [PPP].
    - Early attendance: 0.5 + 0.5 + 0.5 + 0.5 + 0.5.
    - Bonus: 1 + 0.5 + 1 + 0.5 + 0.5 (prime) + 1 (count rooms) + 1 (dice) + 1 (coin) + 1 (coin combination I) + 0.5 (count divisor) + 1 (common divisor) + 1 (distribute apple) + 0.75 (l'Hospital) + 1 + 1 (count bit) + 0.5 (2 knights) + 0.5 + 0.5 + 1 (filled subgrid count I).
11. Đặng Minh Phương.
    - Early attendance: 0.5 + 0.5 + 0.5 + 0.5.
    - Absence: -2.
    - Bonus:
12. Nguyễn Hoàng Quân.
    - Early attendance: 0.5 + 0.5 + 0.5 + 0.5 + 0.5.
    - Bonus: 1.
13. Dương Nguyễn Minh Sơn.
    - Early attendance: 0.5 + 0.5 + 0.5 + 0.5 + 0.5.
    - Bonus:
14. Hấu Trung Thành.
    - Absence: -2 - 2 - 2.
    - Early attendance: 0.5 + 0.5.

15. Tạ Minh Thiện.
    - Early attendance: 0.5 + 0.5 + 0.5 + 0.5 + 0.5.
    - Bonus: 1.
16. Lê Nguyễn Quốc Toàn.
    - Early attendance: 0.5 + 0.5 + 0.5 + 0.5 + 0.5.
    - Bonus: 2.
17. Nguyễn Hoàng Ngọc Trân.
    - Absence: -2 - 2 - 2 - 2 - 2.
    - Bonus:
18. Nguyễn Anh Tuyển.
    - Early attendance: 0.5 + 0.5 + 0.5 + 0.5 + 0.5.
    - Bonus:
19. Nguyễn Như Ý.
    - Early attendance: 0.5 + 0.5 + 0.5 + 0.5 + 0.5.
    - Bonus: 1.

1.1 Potential topics for midterm exam

1. Cho dãy số $\{u_n\}_{n=1}^{\infty}$. Cho vài giá trị cụ thể của ε, tính N_ε.

2 UMT Summer Semester 2025/1481: Introduction to Mathematical Analysis

1. Lê Minh Trâm Anh.
    - Absence: -2.
    - Early attendance: 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75.
    - Bonus: 3.5.
2. Nguyễn Bảo Anh.
    - Early attendance: 0.75 + 0.75 + 0.75 + 0.75 + 0.75.
    - Late: 5 mins.
3. Cao Gia Bảo.
    - Absence: -2.
    - Early attendance: 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75.
4. Vũ Văn Đạt.
    - Absence: -2 - 1.
    - Early attendance: 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75.
    - Bonus: 1 + 0.5.
5. Trần Văn Hậu.
    - Absence: -2.
    - Early attendance: 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75.
    - Bonus: 1.
6. Nguyễn Ngọc Bích Hiền [NNBH].
    - Early attendance: 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75.
    - Bonus: 0.25 + 1 + 1 + 2 + 1 + 1.5 + 1.5 (int poly) + 1.5 (int poly like).
7. Nguyễn Văn Hiếu.
    - Absence: -2 - 2.

- Early attendance: 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75.

8. Dương Xuân Hưng [DXH].
   - Early attendance: 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75.
   - Bonus: 1 + 1 + 1 (gift) + 1 (picture) + 2 (count rooms) + 2.5 (coin combination I) + 2 (coin combination II) + 3 (array description) + 1.5 (numerical differentiation OOP) + 2 (next prime) + 0.5 (weird alg) + 1.5 (int poly) + 1 (miss num) + 0.5 (repetition) + 0.5 (increase array) + 0.5 (hangover) + 3 (IMO2007P3) + 0.5 (ugly num) + 1 (max xor sum).
9. Trần Lê Gia Huy.
   - Early attendance: 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75.
   - Late: 20 mins.
10. Trần Quang Huy.
    - Absence: -2.
    - Early attendance: 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75.
    - Bonus: 1.
    - Late: 22 mins.
11. Đặng Phúc An Khang [DPAK].
    - Absence: -2 - 2.
    - Early attendance: 0.75 + 0.75 + 0.75 + 0.75.
    - Late: 15 + 52 + 80 mins.
    - Bonus: 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 1 + 0.5 (virus) + 0.5 (gift) + 0.5 (game) + 0.25 (financial management) + 0.5 + 0.5 (prime) + 1 (red black) + 1 + 1 (x^a) + 1 (count room) + 1 (build road) + 1 (dice combination) + 1 (minimizing coin) + 1 (coin combination I) + 1 (coin combination II) + 1.5 (remove digit) + 1 (grid path I) + 1 (book shop) + 1 (exp I) + 1.5 (edit distance) + 1.5 (longest common subsequence) + 1 (num diff polynomial) + 1.5 (prime multiple) + 0.75 (next prime) + 1 (binom coeff) + 1.5 (meet middle) + 1.5 (Hamming dist) + 0.25 (palindrome reorder) + 0.75 (2 set) + 0.25 (bit string) + 0.25 (num spiral) + 0.25 (trailing 0) + 0.25 (tower Hanoi) + 0.5 (apple division) + 0.25 (create string) + 0.25 (IMO2007P5) + 0.25 (IMO2008P3) + 0.25 (hangover) + 0.25 (sum) + 0.1 (humidex) + 0.25 (quicksum) + 0.25 (specialized 4-digit num) + 0.25 (contesting decision) + 0.25 (Dirichlet) + 0.25 (circumference circle) + 0.25 (vertical histogram) + 1.5 (IMO2007P1) + 0.25 (gold coin) + 0.25 (bee) + 0.25 (manager) + 0.25 (Pascal lib) + 0.25 (ride school) + 0.25 (self num) + 0.25 (speed limit) + 0.25 (3n + 1 prob) + 0.25 (calendar) + 0.5 (sym order) + 0.25 + 0.75 (knapsack) + 0.5 (tile) + 0.25 (Hanoi tower) + 0.25 (mex grid construction) + 0.25 (knight move grid) + 0.5 + 1 + 0.25 + 2 (Stirling 1) + 2 (falling factorial) + 2 (rising factorial).
12. Lương Quốc Khánh.
    - Early attendance: 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75.
    - Bonus: 1 + 1 + 1 + 1.
13. Nguyễn Hà Đăng Khoa.
    - Early attendance: 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75.
    - Bonus: 1 + 0.5.
14. Nguyễn Huy Đăng Khoa.
    - Absence: -1 - 2.
    - Early attendance: 0.75 + 0.75 + 0.75 + 0.75 + 0.75.
15. Huỳnh Đỗ Đăng Khoa.
    - Late: 23 + 45 + 25 + 20 + 10 + 25 + 22 mins.
    - Early attendance: 0.75.
16. Trần Trung Kiên.
    - Early attendance: 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75.
17. Nguyễn Huỳnh Chí Lâm.
    - Early attendance: 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75.
    - Bonus: 1 + 0.75 + 1 + 1.

18. Lê Hoàng Linh.
    - Absence: -2.
    - Early attendance: 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75.
    - Bonus: 1 + 1 + 1.5 + 1 + 2 + 2.5 + 1.5.
    - Late: 30 mins.
19. Lâm Bảo Ngọc.
    - Absence: -1.
    - Early attendance: 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75.
    - Bonus: 0.25 + 1 + 4 + 1 + 1.
20. Nguyễn Lương Nghĩa [NLN].
    - Early attendance: 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75.
    - Bonus: 0.5 + 1 + 1 + 3 + 1.5 + 1.5 + 1.5 + 1 + 1 + 1.5 (int) + 2.5.
21. Trần Phúc Nguyên.
    - Early attendance: 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75.
22. Bùi Văn Nhớ.
    - Early attendance: 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75.
    - Late: 40 + 10 mins.
    - Bonus: 1 + 1 + 1 + 1 + 3 + 0.75 + 2.
23. Lê Thanh Tân.
    - Absence: -1 - 1 - 2.
    - Early attendance: 0.75 + 0.75 + 0.75 + 0.75.
    - Late: 5 mins.
24. Huỳnh Thị Kiều Thu.
    - Early attendance: 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75.
    - Bonus: 1 + 1 + 1 + 1.5 + 1.5 + 1 + 2.
25. Hoàng Nghĩa Tín.
    - Absence: -2.
    - Early attendance: 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75.
26. Hoàng Anh Tuấn.
    - Absence: -2 - 2.
    - Early attendance: 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75.
27. Ngô Thanh Tùng.
    - Absence: -2 - 2 - 2.
    - Early attendance: 0.75 + 0.75 + 0.75.
    - Late: 29 + 15 mins.
28. Ngô Hoàng Tùng [NHT].
    - Absence: -2.
    - Early attendance: 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75.
    - Bonus: 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 1.5 + 0.5 + 0.5 (virus) + 0.5 (vni) + 0.5 (gift) + 0.5 (game) + 1 + 1 (count rooms) + 1 (labyrinth) + 1 (build roads) + 1 (dice) + 1 (min coin) + 1 (coin combination I) + 1 (coin combination II) + 1 (remove digit) + 1 (grid path) + 1.5 (array description) + 1 (book shop) + 1.5 (count towers) + 1.5 (edit distance) + 1 (exp I) + 1 (exp I) + 1 (num diff poly) + 1.25 (num diff poly 1) + 1.5 (Josephus queries) + 2 (sum divisor) + 0.75 (next prime) + 0.75 (next prime) + 1 (binom coeff) + 1 (create string II) + 1 (distribute apple) + 1 (Christmas party) + 3 (permutation order) + 1.5 (Hamming dist) + 0.75 (int poly C++) + 0.25 (palindrome reorder) + 0.25 (2 sets) + 0.25 (create string) + 0.5 (midterm) + 0.15 (humidex) + 0.25 (hangover) + 0.25 (specialized 4 digit num) + 0.25 (quick sum) + 0.25 (contesting decision) + 0.25 (vertical histogram) + 0.25 (ride school) + 0.75 (ugly number) + 0.25 (bee) + 0.25 (gray code) + 1 (filled subgrid count II).

29. Trần Mộng Tuyền.

- Absence: -1 - 1.
- Early attendance: 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75.
- Bonus: 1.5.

30. Nguyễn Quang Vỹ.

- Absence: -1 - 2.
- Early attendance: 0.75 + 0.75 + 0.75 + 0.75 + 0.75 + 0.75.
- Bonus: 1.5 + 4 + 1 + 1.5 + 1.5 + 1 + 1.5 + 1.5.

3 UMT Summer Semester 2025/1387: Combinatorics & Graph Theory

1. Võ Ngọc Trâm Anh [VNTA].

- Early attendance: 0.25 + 0.5 + 0.25 + 0.5 + 0.25 + 0.5 + 0.25 + 0.5 + 0.25 + 0.5 + 0.25 + 0.5 + 0.25.
- Bonus: 0.75 + 1 + 2 + 1.5 + 0.5 + 0.5 + 0.5 (Fibonacci + Lucas) + 0.5 (virus) + 2.5 (gen func) + 2 (Euler candy gen func) + 0.5 (houseboat) + 0.5 (prime) + 1 (red black) + 1 (count rooms) + 1 (labyrinth) + 1 (build roads) + 1 (message routes) + 1 (build team) + 1 (round trip) + 1 (monster) + 1.5 (flight route) + 1 (dice) + 1 (coin) + 1 (coin combination I) + 1 (coin combination II) + 1 (grid path) + 2 (Dijkstra) + 3 (proof Dijkstra) + 2.5 (Dijkstra priority queue) + 1 (exp I) + 1 (exp II) + 1 (Stirling 2 DP) + 0.5 + 0.75 + 1 (valid parentheses) + 1 (C++ valid parentheses) + 1 (PAC Catalan C++) + 1 (Pascal triangle, multinomial) + 0.5 (count geo domain) + 1.5 (Josephus queries) + 1.5 (Bell matrix multiplication) + 0.5 + 0.5 + 1 (count coprime pair) + 1 (binom coeff) + 1 (create string II) + 1 (distribute apple) + 1 (Christmas party) + 0.75 (spanning tree) + 0.75 (tiling) + 0.25 (weird alg) + 0.25 (repetition) + 0.25 (miss number) + 0.25 (increase array) + 0.25 (permutation) + 1 (line segment intersection) + 1.5 (graph representation converters) + 0.25 (derangement) + 0.25 (coffee) + 2 (score tool) + 1 (count 1) + 0.5 (knapsack) + 1 (int partition) + 0.5 (p 5n + 4) + 0.75 (Newton binomial) + 0.25 (partition) + 0.5 (subset square num) + 2 (Stirling II) + 2 (falling factorial).

2. Hoàng Anh [HA].

- Early attendance: 0.25 + 0.25 + 0.5 + 0.25 + 0.5 + 0.25 + 0.5 + 0.25 + 0.5 + 0.25 + 0.5 + 0.25.
- Bonus: 1.5 + 1 + 0.5 + 1.5 + 1 (Stirling 2).

3. Võ Huỳnh Thái Bảo.

- Early attendance: 0.25 + 0.25 + 0.5 + 0.25 + 0.5 + 0.25 + 0.5 + 0.25 + 0.5 + 0.25 + 0.5 + 0.25.
- Late: 7 mins.
- Bonus:

4. Trần Mạnh Đức.

- Absence: -1.
- Early attendance: 0.25 + 0.5 + 0.25 + 0.25 + 0.25 + 0.5 + 0.5 + 0.25 + 0.5 + 0.25.
- Bonus: 1.5 + 1 + 1.5 + 0.5 (Stirling 2).
- Late: 18 + 7 mins.

5. Nguyễn Trung Hậu.

- Absence: -2 - 2 - 2 - 2 - 2 - 2.
- Early attendance: 0.25 + 0.25 + 0.25 + 0.25.
- Bonus: 1.
- Late: 24 + 20 mins.

6. Phạm Phước Minh Hiếu [PPMH].

- Early attendance: 0.25 + 0.5 + 0.25 + 0.5 + 0.25 + 0.5 + 0.25 + 0.5 + 0.25 + 0.5 + 0.25 + 0.5 + 0.25.
- Bonus: 1 + 0.5 + 1 (Stirling 2) + 1 (Stirling 2 Python) + 1.5 (int partition) + 1.5 (Stirling 1 Python).
  Chấm report Hiếu week 1: B2 Catalan mã O+1 bạn hiểu sai đề: đề kêu chứng minh số cách đặt n dấu (&) đúng là số Catalan C_n, hông phải tính số Catalan số 4 nên +0. bài m số 0 & $n-m$ số 1, làm cách khác tui +1. Prob. 4 CM $|2^{\lfloor n \rfloor}| = 2^n$: +1. Prob. 5: dùng nguyên lý bao hàm-loại trừ chưa chặt chẽ, bài đó cần lý luận nhiều & khó hơn: +0.25. Prob. 6: +1. Prob. 1: +1. Prob. 2: +1.
  Ex1.cpp: +0.5, Ex3: +0.5, Ex5.cpp: +1, Ex6.cpp: +1. Ex7.cpp: +1, Ex8.cpp & Ex9.cpp: +0 (bài toán khó hơn thế vì có thể có nhiều bộ điểm thẳng hàng nên việc mô tả cấu trúc hình học là phần khó chính)

7. Hoàng Quang Huy.
   - Absence: -2 - 1.
   - Early attendance: 0.25 + 0.5 + 0.25 + 0.5 + 0.25 + 0.5 + 0.25 + 0.25 + 0.5 + 0.25.
   - Bonus: 2 + 1.5.
8. Phan Nguyễn Duy Kha.
   - Absence: -1 - 1 - 2 - 2.
   - Early attendance: 0.25 + 0.5 + 0.25 + 0.25 + 0.25 + 0.25 + 0.25.
   - Bonus: 1.5 + 1 + 1 + 1 + 1.5 + 1.5 + 1.5 ($).
   - Late: 60 mins.
9. Dặng Phúc An Khang.
   - Bonus: 0.5 + 1 + 1.
10. Phạm Minh Khoa.
    - Absence: -2 - 2 - 1.
    - Early attendance: 0.25 + 0.5 + 0.25 + 0.5 + 0.25 + 0.25 + 0.25 + 0.5 + 0.25.
    - Bonus:
    - Late:
11. Trần Thành Lợi.
    - Absence: -2 - 2 - 2 - 2 - 2.
    - Early attendance: 0.25 + 0.25 + 0.25 + 0.25.
    - Bonus:
    - Late: 23 + 60 mins.
12. Lê Đức Long.
    - Absence: -2.
    - Early attendance: 0.25 + 0.25 + 0.5 + 0.25 + 0.5 + 0.25 + 0.5 + 0.25 + 0.5 + 0.25.
    - Bonus: 1 + 0.5 + 1 + 1.
13. Lê Công Hoàng Phúc.
    - Early attendance: 0.25 + 0.5 + 0.25 + 0.25 + 0.25 + 0.5 + 0.5 + 0.25 + 0.5 + 0.25.
    - Bonus: 1 + 1 + 1 (induction).
    - Late: 24 + 3 + 12 mins.
14. Huỳnh Nhật Quang.
    - Absence: -2.
    - Early attendance: 0.25 + 0.25 + 0.25 + 0.25.
    - Late: 10 + 20 + 20 + 20 + 28 + 22 mins.
    - Bonus:
15. Cao Sỹ Siêu.
    - Early attendance: 0.25 + 0.5 + 0.25 + 0.5 + 0.25 + 0.5 + 0.25 + 0.5 + 0.5 + 0.25 + 0.25.
    - Bonus: 1 + 1 + 1.
    - Late: 8 mins.
16. Sơn Tân [ST].
    - Early attendance: 0.25 + 0.5 + 0.25 + 0.5 + 0.25 + 0.5 + 0.25 + 0.5 + 0.5 + 0.25 + 0.5 + 0.25.
    - Bonus: 1 + 1 + 1.5 + 2 (Linux).
      Chấm report Sơn Tân: 0.25 (a) + 0.25 (b) + 0.25 (c) + 0.25 (e) + 0.25 (g, ghi sai mũ) + 0.25 (h) + 1.5 (Pascal, làm được cho $(\sum_{i=1}^{m} a_i)^n$ nhiều điểm hơn) + 2 (tính C_n^k) + 1 (graphic sequence) + 1.5 (Euler d) + 2.5*** (Euler).
17. Nguyễn Ngọc Thạch [NNT].

- Early attendance: 0.25 + 0.25 + 0.5 + 0.25 + 0.5 + 0.5 + 0.25.
- Bonus: 3 + 1 + 1 + 1.5 + 2 (Catalan) + 5 (Euler candy) + 2.5 (induction) + 1 (toss coin) + 1 (dice roll) + 1 (dice roll) + 1 + 1 + 2 (combinator identity) + 1.5 (dollar) + 0.5 + 2.5 + 1.5 + 1 + 1 + 1 + 1 + 1.5 + 1 + 1.5 (Stirling 2 recursive).
- Late: 5 + 23 + 34 mins.

18. Phan Vĩnh Tiến [PVT].
    - Late: 8 + 25 + 16 mins + 48 + 14.
    - Early attendance: 0.25 + 0.5 + 0.25 + 0.5 + 0.25 + 0.25 + 0.25.
    - Bonus: 2 + 0.5 (virus) + 1 + 2 (binomial) + 1 (exp I) + 1 (exp II) + 1 (Stirling 2 DP) + 1 (Bell) + 1.5 (ads) + 1 (banana) + 0.5 (point location test) + 2 (IMO2007P1) + 2 (Newton binomial, multinomial thm) + 1.5 (count bit) + 1 (int partition).

3.1 Potential topics for midterm- & final exams

- Chứng minh bằng phương pháp quy nạp toán học.
- Bài toán chia kẹo Euler.
- Khai triển nhị thức Newton.
- Sử dụng định lý Euler & thuật toán Havel-Hakimi để chạy tay kiểm tra 1 dãy có phải là graphical sequence hay không. Vẽ đồ thị minh họa.
- Hàm sinh.
- Chạy tay thuật toán Dijkstra.
- Shortest path problem on graph – Bài toán đường đi ngắn nhất.

4 UMT Summer Semester 2025/1488: Introduction to AI

1. Hồ Lê Duy.
    - Absence: -2 - 2.
    - Early attendance: 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5.
2. Trương Công Hoan.
    - Absence: -2.
    - Early attendance: 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5.
3. Lữ Minh Hoàng.
    - Early attendance: 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5.
4. Đinh Kim Hưng.
    - Absence: -1.
    - Early attendance: 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5.
    - Bonus: 3 + 3.
5. Huỳnh Võ Quốc Khánh.
    - Absence: -2 - 2 - 2 - 2 - 2 - 2.
    - Early attendance: 0.5 + 0.5.
6. Nguyễn Nhật Khôi.
    - Absence: -2 - 1 - 2 + 0.5.
    - Early attendance: 0.5 + 0.5 + 0.5 + 0.5.
7. Vòng Lý Nàm Phúc VLNP.
    - Early attendance: 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5.
    - Bonus: 1.5 + 2 (extended scheduling) + 3 (solve triangle ccc) + 3 (solve triangle cgc) + 3 (solve triangle gcg) + 2 (graph color) + 3 (A*) + 4 (TSP).
8. Hầu Trung Thành.

- Absence: -2 - 2 - 2 - 2.
- Early attendance: 0.5 + 0.5 + 0.5.
- Late: 5 mins. + 0.5

9. Nguyễn Thi.
   - Absence: -2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2.
10. Dặng Nguyễn Duy Trường.
    - Early attendance: 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5.

5 UMT Summer Semester 2025/1493: Information Technology Fundamentals 2

1. Cao Nguyễn Gia An.
   - Early attendance: 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5.
   - Bonus: 3.5 + 2 + 2 + 2.5 + 2.5 + 1 + 1.5 + 1 + 1 + 1.5 + 2.5 + 1 (eval func) + 1.5 + 2 + 2 + 2.5 + 1.25 + 1 + 1 + 0.5 + 1 (Fib) + 1.5 (HN) + 2 + 2 + 2 + 2.5 (partition) + 1.5 + 2.
   - Midterm: 4.5.
2. Hoàng Trâm Anh.
   - Early attendance: 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5.
   - Bonus: 1 + 2 + 2 + 2.5 + 1.5 + 0.5 + 1 + 1.5.
   - Midterm: 8.
3. Bùi Nguyên Minh Dũng.
   - Early attendance: 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5.
   - Bonus: 2.5 + 2 + 2 + 2.5 + 2.5 + 1 + 1.5.
   - Midterm: 10.
4. Nguyễn Ngọc Hân.
   - Early attendance: 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5.
   - Bonus: 0.5 + 1 + 1.5 + 0.5 + 1 + 1 + 1.5 + 1 + 1.5 + 2 + 2 + 2.5 + 0.5 + 1 + 1.5 + 1.5.
   - Midterm: 7.
5. Nguyễn Thành Thái Hiệp.
   - Early attendance: 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5.
   - Bonus: 3 + 2 + 2 + 2.5 + 2.5 + 1 + 1.5 + 0.5 + 1 + 1.5 + 1 + 1.5 + 2.5 (near perfect) + 2 + 2.
   - Midterm: 6.5.
6. Vũ Nguyễn Yến Hoa.
   - Absence: -2.
   - Early attendance: 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5.
   - Bonus: 1 + 2 + 2.5 + 1 + 1.5 + 0.5 + 1 (eval func) + 1.5 + 2 + 1 + 1.5 + 2.
   - Midterm: 6.
7. Đỗ Huy Hoàng.
   - Early attendance: 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5.
   - Bonus: 1 (Fib) + 1.5 + 2 + 1.5.
   - Midterm: 3.5.
8. Nguyễn Gia Huy.
   - Absence: -2 - 2 - 2.
   - Early attendance: 0.5 + 0.5 + 0.5.
   - Early attendance: 0.5 + 1 (eval func) + 1.5 + 2 + 2 + 2.5 + 1 + 0.5.

- Midterm: 5.5.

9. Phạm Lâm Gia Khánh.
   - Absence: -2.
   - Early attendance: 0.5 + 0.5.
   - Late: 15 mins.
   - Bonus: 0.5 + 0.5 + 1 + 1.5 + 2 + 1.5.
   - Midterm: 5.5.
10. Phạm Xuân Khánh.
    - Absence: -2 - 1 - 2 - 2.
    - Early attendance: 0.5
    - Late: 15 + 30 mins.
    - Bonus: 2 + 1 + 1.5 + 0.5 + 1 + 1.5 + 1 + 2.
    - Midterm: 10.25.
11. Bùi Đức Khoa.
    - Absence: -2.
    - Early attendance: 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5.
    - Bonus: 0.5 + 2 + 1 (eval func) + 1.5 + 0.5 + 1.5 + 2.
    - Midterm: 3.
12. Trần Vũ Nguyên Khôi.
    - Absence: -1 - 2.
    - Early attendance: 0.5 + 0.5 + 0.5 + 0.5.
    - Late: 20 mins.
    - Bonus: 3 + 2 + 2 + 1 + 1.5 + 1 + 1.5 + 1 + 1.5 + 2 + 2 (near perfect) + 2 + 2.5 + 0.5 + 1 (Fib).
    - Midterm: 5.25.
13. Vũ Thị Ngọc Lan.
    - Early attendance: 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5.
    - Bonus: 2.5 + 2 + 2 + 2.5 + 1 + 1.5 + 0.5 + 1 + 1.5 + 1 + 1.5 + 2 + 2 + 2.5 + 1 + 0.5 + 1 + 2 + 3.
    - Midterm: 10.5.
14. Trần Văn Lên.
    - Early attendance: 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5.
    - Bonus: 0.5 + 2 + 2 + 2.5 + 2.5 + 1 + 1.5 + 1 + 1 + 1.5 + 1 (eval func) + 1.5 + 2 + 2 + 2.5 + 1 + 0.5 + 1.5 + 2 + 1.5.
    - Midterm: 4.
15. Thái Anh Nhật Thiên Long.
    - Absence: -2 - 2 - 2 - 2.
    - Early attendance: 0.5 + 0.5 + 0.5 + 0.5.
    - Bonus: 2 + 2 + 2.5 + 1.5.
    - Midterm: 7.5.
16. Lê Nguyễn Bảo Ngọc.
    - Absence: -2 - 1 - 2 - 2.
    - Late: 15 + 15 + 10 mins.
    - Bonus: 1 + 1.5 + 0.5 + 1 + 1.5 + 1 + 1.5 + 2 + 1.5 + 2 (Pascal triangle).
    - Midterm: 9.75.
17. Lê Hồng Ngọc.
    - Absence: -2 - 1.

- Early attendance: 0.5 + 0.5 + 0.5 + 0.5 + 0.5.
- Bonus: 2 + 2.5 + 1 (eval func) + 1.5 + 2 + 2 + 0.5 + 1 (Fib) + 2.5 + 1.5 + 2.
- Midterm: 8.75.

18. Nguyễn Hữu Nhân.

- Absence: -2 - 2 - 2.
- Early attendance: 0.5 + 0.5.
- Bonus: 0.5 + 1.5 + 2.
- Late: 15 mins.
- Midterm: 3.5.

19. Lâm Thiện Nhân.

- Absence: -2 - 2.
- Early attendance: 0.5 + 0.5 + 0.5 + 0.5 + 0.5.
- Bonus: 2.5 + 1 + 1.
- Midterm: 5.

20. Phạm Minh Nhật.

- Absence: -2
- Early attendance: 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5.
- Bonus: 1.5 + 2 + 2 + 2.5 + 1 + 1.5 + 2 + 0.5 + 1 + 1.5.
- Midterm: 6.75.

21. Phạm Quỳnh Như.

- Early attendance: 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5.
- Bonus: 1 (eval func)
- Midterm: 8.25.

22. Nguyễn Ngọc Quỳnh Như.

- Early attendance: 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5.
- Midterm: 8.

23. Đoàn Trương Thiên Phong.

- Absence: -2 - 2.
- Early attendance: 0.5 + 0.5 + 0.5 + 0.5.
- Midterm: 7.

24. Hồ Tấn Tài.

- Absence: -2.
- Early attendance: 0.5 + 0.5 + 0.5 + 0.5.
- Bonus: 1.5 + 2 + 2 + 1 + 0.5 + 1 + 1 + 1.5 + 2 + 1.5.
- Late: 10 mins.
- Midterm: 10 + 15.

25. Hồ Quốc Thành.

- Early attendance: 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5.
- Bonus: 1 + 1.5 + 1 + 1 + 1.5 + 1 + 0.5.
- Midterm: 4.5.

26. Nguyễn Thị Minh Thư.

- Absence: -2 - 2 - 2 - 2 - 2 - 2 - 2.
- Midterm: 0.

27. Đỗ Thị Hải Tình.

- Early attendance: 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5.
- Bonus: 2 + 2 + 2.5 + 1 + 1.5 + 0.5 + 1 + 1.5 + 1 + 1.5 + 2 + 0.5.
- Midterm: 9.75.

28. Võ Đoàn Thái Toàn.

- Early attendance: 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5.
- Bonus: 0.5 + 2 + 2 + 1 + 0.5 + 1 + 1 + 1.5 + 2 + 2.5 + 0.5 + 1.
- Midterm: 9.

29. Trần Quốc Trung.

- Early attendance: 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5.
- Bonus: 0.5 + 2 + 2 + 2.5 + 1 + 0.5 + 1.5 + 1 + 1.5 + 2 + 0.5.
- Midterm: 8.25.

6 Olympic Tin OLP ICPC

1. Đoàn Nguyễn Đăng Khoa [DNDK]. K3.

- Bonus: 0.5 (weird alg) + 0.5 (miss number) + 0.5 (repetition) + 0.5 (increase array) + 0.5 (permutation) + 0.5 (num spiral) + 0.5 (bit string) + 0.5 (trailing zero) + 0.5 (coin pile) + 0.5 (IMO2007P5) + 0.5 (hangover) + 0.5 (sum) + 0.5 (ugly number) + 0.5 (speed limit) + 0.5 (self num) + 0.5 (gold coin) + 0.25 (3n + 1 prob) + 0.5 (Hanoi tower).

2. Đỗ Anh Kiệt [DAK].

- Bonus: 0.5 (virus) + 1 (count rooms) + 1 (dice) + 1.5 (shortest route I) + 1 (distribute apple) + 3 (permutation order) + 0.25 (trailing zero) + 0.5 (Raab game) + 2.5 (IMO2007P3) + 0.25 (hangover) + 1.5 (count bit) + 0.75 (grid color I).

3. Trần Quang Sơn [TQS]. K3.

- Bonus: 0.5 + 1 (prime) + 1 (houseboat) + 0.5 (weird alg) + 0.5 (miss number) + 0.5 (repetition) + 0.5 (increase array) + 0.5 (num spiral) + 0.5 (bit string) + 0.5 (trailing 0) + 0.5 (coin pile) + 0.5 (IMO2007P5) + 0.5 (speed limit) + 0.5 (ride to school) + 0.5 (self num) + 0.5 (bee) + 0.5 (gold coin) + 0.25 (3n + 1 prob) + 0.5 (Pascal lib).

4. Phạm Đăng Hoàng Thiên [PDHT]. K3.

- Bonus: 0.5 + 1 (houseboat) + 2 (remove digit) + 1.5 (next prime) + 2 (Christmas party).

7 Miscellaneous