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| **Faculty Information** | **Name** | | Jinwook Jung | | | | | |
| **E-mail** | | [jinwookjung@hanyang.ac.kr](mailto:jinwookjung@hanyang.ac.kr) | | | | | |
| **Home University** | | Hanyang University | | | | | |
| **Department** | | Department of Mathematics | | | | | |
| **Homepage** | | https://jinwookjung12.wordpress.com | | | | | |
| **Course Information** | **Class No.** | | TBA | **Course Code** | GEN2053 | | **Credits** | 3 |
| **Course Name** | | Calculus 2 | | | | | |
| **Lecture Schedule** | | Mon-Fri / 09:00 – 12:00 & 13:00 - 15:00 | | | | | |
| **Course Description** | | This course builds on Calculus 1 and introduces key concepts in Calculus and analytic geometry, including functions of several variables, partial derivatives, and multiple integrals. | | | | | |
| **Course Objective** | | 1. Introduce the concept of partial derivatives and multiple integrals 2. Provide students with the ability to understand mathematical tools used in diverse context | | | | | |
| **Prerequisite** | | * Calculus 1 | | | | | |
| **Materials/Textbooks** | | Essential Calculus: Early Transcendentals(2nd edition) by J. Stewart | | | | | |
| **Evaluation** | **Attendance** | | 10 % | **Quiz** | | 10 % | | |
| **Assignment** | | % | **Mid-term Exam** | | 40 % | | |
| **Presentation** | | % | **Final Exam** | | 40 % | | |
| **Group Project** | | % | **Participation** | | % | | |
| **Etc.** | | **Evaluation Item** | | | **Ratio** | | |
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| **Daily**  **Lecture Plan** | **Day 1** | Introduction of the course; Vector functions and space curves; Arc length and curvature; Functions of several variables | | | | | | |
| **Day 2** | Limits and continuity; Partial derivatives; Tangent planes and linear approximation; The chain rule | | | | | | |
| **Day 3** | Quiz #1; Directional derivatives and the gradient vector; Maximum and minimum values; Lagrange multiplier | | | | | | |
| **Day 4** | Double integrals over rectangles; Double integrals over general regions; Q&A session | | | | | | |
| **Day 5** | Mid-term; Double integrals in polar coordinates; Triple integrals | | | | | | |
| **Day 6** | Triple integrals in cylindrical coordinates; Triple integrals in spherical coordinates; Vector fields; Line integrals | | | | | | |
| **Day 7** | Quiz #2; The fundamental theorem for line integrals; Green’s theorem; Curl and divergence; Parametric surfaces and their areas | | | | | | |
| **Day 8** | Surface integrals; Stokes’ theorem; The divergence theorem; Q&A | | | | | | |
| **Day 9** | Final | | | | | | |