

Department of Mathematics  
 Institut Teknologi Sepuluh Nopember  
 email : matematika@its.ac.id – web : <https://www.its.ac.id/matematika>

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| <b>Course</b> | <b>Course Name</b> : Analytical Geometry |
|               | <b>Course Code</b> : KM184103            |
|               | <b>Credit</b> : 3                        |
|               | <b>Semester</b> : 1                      |

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| <b>Description of Course</b>   |   |
| In this course, students will learn the Cartesian Coordinate, the position of points and their equations, magnitude geometry; Types of Conical sections, equations of tangents and normal lines, coordinate transformation. Students will learn to understand and able to explain the material on analytic geometry, especially flat geometry. |   |
| <b>Learning Outcome</b>  |   |
| PLO 1  | [C2] Students are able to identify and explain foundations of mathematics that include pure, applied, and the basic of computing  |
| PLO 2  | [C3] Students are able to solve simple and practical problems by applying basic mathematical statements, methods and computations |
| <b>Course Learning Outcome</b>   |   |
| 1. Students able to explain basic principles of theory related to objects in plane geometry<br>2. Students able to relate basic concepts of plane geometry to some applications  |   |
| <b>Main Subject</b>  |   |
| Cartesian coordinate: line equations, distance of two points, distance of line and point, angle between two lines, conical wedge: equation of circles, parabola, ellipse, and hyperboles, equation of tangent and normal lines over  |   |

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| circles, coordinate transformation, equation for sphere, cylinder, Paraboloids, Hyperboloids.           |
| <b>Prerequisites</b>  |
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| <b>Reference</b>  |
| 1. Riddle D. F., “Analytic Geometry”, PWS Publishing Company, Boston, 1995.                             |
| <b>Supporting Reference</b>   |
| 1. Parker, L., George Wentworth, David Eugene Smith; Analytic Geometry; Ginn and Company; Boston; 1922. |