

# 16.基礎数学(Basic Mathematics)

I (8:45~10:15)    II (10:30~12:00)    III (13:00~14:30)    IV (14:45~16:15)    V (16:30~18:00)    VI (18:15~19:45)

| 授業回数 No. | 月日(曜日)<br>Date            | 時限<br>Time | 講義内容<br>Content   | 担当者 Lecturer                                      |  |                          | 講義室<br>Place                      |
|----------|---------------------------|------------|---|---|--|--------------------------|-----------------------------------|
|          |                           |            |   | 所属<br>Affiliation<br>(研究科等)<br>Graduate<br>School | 職<br>Title/Position                      | 氏名<br>Name               |                                   |
| 1        | 4月10日(火)<br>Tue. April 10 | III        | 極限, 初等関数, 一変数の微分<br>Limits, elementary functions, differentiation                   | LIMS  | 特定講師<br>Program-Specific<br>Senior Lect. | 東森 信就<br>Higashimori, N. | LIMSセミナー室A<br>LIMS Seminar Room A |
| 2        | 4月17日(火)<br>Tue. April 17 | III        | 一変数の微分, 応用<br>Applications of differentiation                                       | "   | "  | "                        | "                                 |
| 3        | 4月24日(火)<br>Tue. April 24 | III        | 一変数の積分<br>Integration in a single variable  | "   | "  | "                        | "                                 |
| 4        | 5月1日(火)<br>Tue. May 1     | III        | 積分の応用, ベータ関数とガンマ関数<br>Applications of integration, Beta and Gamma functions         | "   | "  | "                        | "                                 |
| 5        | 5月8日(火)<br>Tue. May 8     | III        | 行列の演算, 連立一次方程式<br>Operations on matrices, systems of linear equations               | "   | "  | "                        | "                                 |
| 6        | 5月15日(火)<br>Tue. May 15   | III        | 行列式, 正則行列, 逆行列, クラメル公式<br>Determinant, inverse matrix, Cramer's rule                | "   | "  | "                        | "                                 |
| 7        | 5月22日(火)<br>Tue. May 22   | III        | 線形代数における基礎的概念<br>Basic concepts in linear algebra                                   | "   | "  | "                        | "                                 |
| 8        | 5月29日(火)<br>Tue. May 29   | III        | 固有値問題, 応用<br>Eigenvalue problems, applications                                      | "   | "  | "                        | "                                 |
| 9        | 6月5日(火)<br>Tue. June 5    | III        | 内積空間, 実対称行列の対角化<br>Inner product spaces, diagonalization of real symmetric matrices | "   | "  | "                        | "                                 |
| 10       | 6月12日(火)<br>Tue. June 12  | III        | 常微分方程式<br>Ordinary differential equations   | "   | "  | "                        | "                                 |
| 11       | 6月19日(火)<br>Tue. June 19  | III        | 偏微分の計算と応用, 極値問題<br>Partial differentiation and its applications: extremum problems  | "   | "  | "                        | "                                 |
| 12       | 6月26日(火)<br>Tue. June 26  | III        | 重積分(1)<br>Multiple integrals (1)  | "   | "  | "                        | "                                 |
| 13       | 7月3日(火)<br>Tue. July 3    | III        | 重積分(2)<br>Multiple integrals (2)  | "   | "  | "                        | "                                 |
| 14       | 7月10日(火)<br>Tue. July 10  | III        | フーリエ級数, フーリエ変換, ラプラス変換<br>Fourier series, Fourier transform, Laplace transform      | "   | "  | "                        | "                                 |
| 15       | 7月17日(火)<br>Tue. July 17  | III        | ベクトル解析<br>Vector calculus   | "   | "  | "                        | "                                 |