

**قسم هندسة المواد و المعادن**  
**Metrological Engineering Department**

**I- General Basic Science Courses (only two courses)**

	<b>Subject</b>	<b>code</b>	<b>credits</b>
<b>1</b>	Advanced Mathematics	GE 604	<b>3</b>
<b>2</b>	Advanced Statistics.	GE606	<b>3</b>
<b>3</b>	Numerical Methods in Engineering	GE 609	<b>3</b>

**II- Compulsory Courses from the Department**

	<b>Subject</b>	<b>code</b>	<b>credits</b>
<b>1</b>	Advanced Metallurgical Thermodynamics	MME 612	<b>3</b>
<b>2</b>	Characterization of Materials	MME 624	<b>3</b>

**III- Specialized Courses from the Department**

	<b>Subject</b>	<b>code</b>	<b>credits</b>
<b>1</b>	Phase Transformation I Metals and Alloys	MME 620	3
<b>2</b>	Structure of Metals	MME 621	3
<b>3</b>	Physical Metallurgy of Steels	MME 622	3
<b>4</b>	Physical Metallurgy of Light Metals and Alloys	MME 623	3
<b>5</b>	Advanced Metal Processing	MME 650	3
<b>6</b>	Advanced Topics in Corrosion	MME 651	3
<b>7</b>	The Formation and Structure of Glass	MME 660	3
<b>8</b>	Physical Properties of Ceramic Materials Measurement and Testing	MME 661	3
<b>9</b>	Structure and Properties of Semiconductors and Dielectrics	MME 670	3
<b>10</b>	Crystal Growth	MME 671	3
<b>11</b>	Thin Film Techniques	MME 672	3
<b>12</b>	Superconducting Materials	MME 673	3

13	Magnetic Materials	MME 674	3
14	Structure and Properties of Polymers	MME 680	3
15	Welding Metallurgy	MME 690	3
16	Advanced Casting	MME 691	3
17	Advanced Mechanical Metallurgy	MME 692	3
18	Wear and Oxidation of Metals	MME 693	3
19	Selected Topics in Materials	MME 697	3
20	Research Project	MME 699	8