

# TOOL DESIGNER

## Curriculum Guide for Academic Year 2012-2013

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Students planning to **transfer** to a four-year college or university should refer to the ASSIST web site at [www.assist.org](http://www.assist.org) and **consult a counselor** before beginning a program of study. Please call 562-938-4561 for the LAC, or 562-938-3920 for PCC to schedule a meeting with a counselor. Students may also wish to visit the Transfer Center on either campus.

### Program of study leading to: Associate in Science (A.S.) Degree

<u>REQUIRED COURSES (LEVEL 1)</u>		UNITS	In Progress	Completed Grade
AMECH 50A	Machine Tool Operation and Practices	3		
DRAFT 201 <b>OR</b>	Introduction to Drafting <b>OR</b>	4		
DRAFT 51A	Industrial Drafting I	3		
ELECT 202 <b>OR</b>	Electrical Mathematics <b>OR</b> * A more advanced or transferable math course (Trigonometry is recommended)	3-4		
† SHMET 220A	Basic Sheet Metal Layout & Fabrication	4		
*				
<b>Subtotal Units</b>		<b>13-15</b>		
<u>REQUIRED COURSES (LEVEL 2):</u>		<u>UNITS</u>		
† DRAFT 51B	Industrial Drafting II	3		
† DRAFT 60	Geometric Dimensioning and Tolerancing	3		
TEC 60AD	Computer Aided Design and Drafting (CADD)	3		
<b>Subtotal Units</b>		<b>9</b>		
<b>TOTAL UNITS</b>		<b>22-24</b>		

For graduation with an **Associate in Science (A.S.) Degree with a major in Tool Designer:**

- Minimum Unit Requirements:** Any course that appears on a curriculum guide and the General Education Pattern (Plan A) may fulfill both major and general education requirements (Approved by College Curriculum Committee Spring 2012). For this degree, complete a minimum of 60 units in courses numbered 1-599. Please note that additional elective units may be required to meet this minimum based upon courses selected to fulfill General Education for the Associate Degree.
 

<b>Tool Designer Major:</b>	22 – 24	units
<b>General Education/A.S.</b>	19	units
<b>Minimum Total Units:</b>	60	units
- Scholarship:** Maintain an **overall grade point average (GPA) of 2.0** ("C" average) based on all accredited college work applied to the degree, no matter where completed. For this **field of concentration, complete each course above with a grade of "C" or better**, or "P" if course is graded on a P/NP basis.
- Residence for the Degree:** Complete at least 30 units of the required 60 in residence at LBCC, or complete in residence at LBCC at least 20 units within the last 30 units of work applied to the degree.
- Residence for the Field of Concentration:** Complete fifty percent (50%) or more of the unit requirements for this field of concentration in residence; this means at **least 12 units** of the required 22-24 must be **completed at Long Beach City College**. Credit earned by exam, where applicable, may be included.

**Associate Degree requirements continued from the previous page.**

5. **General Education and Proficiency Requirements:** Complete the required A.A./A.S. General Education and Proficiency requirements\*, otherwise known as "Plan A". For Plan A requirements, refer to the general catalog or view it online at <http://osca.lbcc.edu> .
6. Complete and submit the degree application form to the Admissions and Records office during your final semester of course work. These forms are available in the Admissions and Records office, or online at <http://admissions.lbcc.edu/> . Refer to the Schedule of Classes (<http://schedule.lbcc.edu>) and click the "Important Dates" link to view the actual deadline for each semester.

\*The requirements for general education/proficiency and the field of concentration (major) need to be from the same catalog year. This catalog year may be any year between the year of initial enrollment to the present, provided continuous enrollment is maintained throughout. See the catalog for definition of "continuous enrollment".

**Program of study leading to:  
Certificate of Achievement**

**REQUIRED COURSES**—Complete the 22 - 24 units of required courses as listed in the Associate Degree requirements box on the first page.

<u>REQUIRED COURSES</u>	In Progress	Completed
<b>TOTAL UNITS</b> 22 – 24		

For graduation with a **Tool Designer Certificate of Achievement:**

1. Complete each of the **REQUIRED COURSES** listed above with a **minimum grade of "C"** or better, or "P" of course is graded on a P/NP basis.
2. Complete fifty percent (50%) or more of the unit requirements for this field of concentration in residence; this means at **least 12 units** of the required 22 - 24 must be **completed at Long Beach City College**. Credit earned by exam, where applicable, may be included.
3. Complete and submit the certificate application form to the Admissions and Records office during your final semester of course work. These forms are available in the Admissions and Records office, or online at <http://admissions.lbcc.edu/> . Refer to the Schedule of Classes (<http://schedule.lbcc.edu>) and click the "Important Dates" link to view the actual deadline for each semester.

For the **Associate in Arts** degree, the following courses are recommended, **BUT ARE NOT REQUIRED.**

**RECOMMENDED but not required courses:**

DRAFT 273	Work Experience – Mechanical Design	4	
TEC 60AD	Computer Aided Design & Drafting (CADD)	3	

**Career Opportunities**

Students prepare for entry-level positions as tool designers in the aerospace or comparable manufacturing industry. Tool designers generate conceptual designs for tools in conformance with defined current tooling engineering standards and practices. Tool designers plan the sequence of operations necessary to layout, fabricate and assemble cost effective tooling.

**Program Mission and Outcomes**

The Program Mission Statement and Outcomes for the Tool Designer program is unavailable at this time. Please contact the department for further information.

- Students will be able to establish mastery of basic knowledge and skills and apply advanced technologies relevant to entering the Tool Design field at an entry or advanced level.
- Students develop career awareness, planning, employability skills, work habits, and foundation knowledge necessary for success in the workplace.
- Students possess the necessary technical knowledge and communication skills to identify, articulate and solve problems pertaining to the industrial manufacturing environment and perform tasks required within the Tool Design professions.

**Legend**

† This course has a prerequisite; prerequisite courses must be completed with at least a "C" or "P" grade (see catalog or schedule of classes).