**ADVANCED MANUFACTURING TECHNOLOGY BACHELOR IN APPLIED SCIENCE**

**Program Description**
The Applied Baccalaureate in Advanced Manufacturing Technology (BAS) is an intensive, hands-on, project-based degree program designed to meet the needs of industry by preparing graduates for technical and managerial leadership positions in our growing global manufacturing economy.

The Advanced Manufacturing Technology program offers students an affordable option to advance their technical knowledge and competency while also providing local employers with the advanced manufacturing talent they need to grow and prosper in the region.

**Mission Statement**
The Bachelor in Applied Science in Advanced Manufacturing Technology degree is designed to provide graduates with the requisite skill sets to empower them to link company advanced manufacturing operations with management directives designed to satisfy customer needs and meet project requirements. Graduates of this program will develop technical and management skills beyond an associate degree, thus providing them a pathway for assuming next-level technical and managerial positions.

**Entrance Requirements**
See “Program Requirements” Section for complete requirements.

**Type of Program**
Part-time Evening

Visit our web page at https://www.gvltec.edu/advanced-manufacturing/.

**Program Requirements**
Acceptance to the college does not guarantee immediate acceptance into the Bachelor in Applied Science in Advanced Manufacturing Technology program. Prior to consideration of acceptance, the following must be met:

- Applicants must have a GPA of 2.5 and a grade of “C” or higher in all technical courses within the completed associate degree.
- Applicants must have completed ENG 101 English Composition I* or ENG 165 Professional Communications.
- Applicants must have completed or be eligible for MAT 110 College Algebra* or MAT 120 Probability and Statistics*.
- Applicants may apply for prior learning (PLA) credit for individual courses, according to GTC policy. PLA or transfer credit will not be awarded for MFG 481 Industry Capstone Project I or MFG 482 Industry Capstone Project II.
- Applicants must complete the online college orientation and then attend a PASS session.
- Applicants must complete and submit the program application form.

Students will be accepted in the order in which all the above are completed.

**Requirements for Completion**
This program requires a minimum grade of “C” in all MFG and EGR courses and MAT 110 College Algebra* and MAT 120 Probability and Statistics*.

**Recommended Program Schedule**
Listed below is the ideal grouping of courses in order by semester. This plan assumes a part-time evening schedule. Note, however, that many variables can affect this plan, and not every course is offered every semester. Please see your advisor to map out your own personalized progression toward graduation.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>Transfer Credits</td>
<td>Technical Transfer Credits</td>
<td>42</td>
</tr>
<tr>
<td></td>
<td>Social Science Transfer Credits</td>
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<tr>
<td></td>
<td>Humanities Transfer Credits</td>
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<tr>
<td><strong>First Semester</strong></td>
<td><strong>Second Semester</strong></td>
<td><strong>Third Semester</strong></td>
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<tr>
<td>EGR 130</td>
<td>Engineering Technology Applications and Programming</td>
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<tr>
<td>MAT 120</td>
<td>Probability and Statistics*</td>
<td>3</td>
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<tr>
<td>MFG 300</td>
<td>Manufacturing Processes and Application</td>
<td>3</td>
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<tr>
<td>ENG 101</td>
<td>English Composition I*</td>
<td>3</td>
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<tr>
<td>MAT 110</td>
<td>College Algebra*</td>
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<tr>
<td>MFG 340</td>
<td>Computer-Aided Design for Manufacturing Engineering</td>
<td>3</td>
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<tr>
<td>MFG 321</td>
<td>Advanced Manufacturing Lab I</td>
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<tr>
<td>ENG 102</td>
<td>English Composition II*</td>
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<tr>
<td>MFG 310</td>
<td>Manufacturing Quality</td>
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<tr>
<td>MFG 322</td>
<td>Advanced Manufacturing Lab II</td>
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<tr>
<td>SPC 205</td>
<td>Public Speaking*</td>
<td>3</td>
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<td>MFG 323</td>
<td>Advanced Manufacturing Lab III</td>
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<td>MFG 330</td>
<td>Manufacturing Project Management</td>
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<td>MFG 350</td>
<td>Production Process Planning</td>
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<td>MFG 370</td>
<td>Principles of Lean Manufacturing</td>
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Manufacturing Technology Elective $^2$ 4
Operations Management Elective $^3$ 3

**Sixth Semester**
Manufacturing Technology Elective $^2$ 4
Operations Management Elective $^3$ 3
MFG 360 Leadership in Manufacturing 3

**Seventh Semester**
General Education Elective 3
General Education Elective 3
MFG 481 Industry Capstone Project I 2
MFG 491 Advanced Manufacturing Senior Seminar I 2

**Eighth Semester**
MFG 482 Industry Capstone Project II 2
MFG 492 Advanced Manufacturing Senior Seminar II 2
Natural Science w/Lab $^4$ 4

Total Required Credit Hours 125

1. MAT 110 College Algebra* and MAT 120 Probability and Statistics* must be completed prior to 3rd semester in the bachelor degree program.

2. Manufacturing Technology electives may include:
   - MFG 401 Advanced Metrology
   - MFG 402 Additive Manufacturing
   - MFG 403 Robotics & Automated Controls III
   - MFG 404 Programmable Logic Controllers IV

   A minimum of two manufacturing technology electives is required.

3. Operations Management electives may include:
   - MFG 311 Work Design, Ergonomics and Safety
   - MFG 312 Manufacturing Enterprise Resource Management
   - MFG 313 Strategic Sourcing and Procurement S
   - MFG 314 Finance for Manufacturing

   A minimum of two operations management electives is required.

4. Natural Science: CHM 105 General Organic & Biochemistry, PHS 101 Physical Science I or PHY 201 Physics I* recommended