Apple Manufacturing Design Intern
(MIE)
To apply please send an email with your resume and cover letter to campusrecruiting@apple.com. Please include UMass and the job title in the subject line.

Education
Major(s): Mechanical Engineering, Material Science, Industrial Engineering, and Chemical Engineering
Degree: BS/MS or equivalent

Description
Apple’s Operations team ensures that Apple’s cutting-edge designs become industry-leading products, delivered on time and on spec. This high profile, highly respected organization is positioned at the junction of Apple’s product teams, the industries that supply core component technologies, and our manufacturing partners who help ensure that products such as iPad, iPhone and Mac can be restocked just as fast as they fly off the shelves. We’re looking for energetic people to support the procurement, manufacturing, fulfillment and support of all things Apple.

Key Qualifications
- Experience in a hands-on manufacturing environment.
- Experience developing quality plans, validating test methods and gauges, and driving corrective actions / failure analysis efforts.
- Knowledge of quality and reliability concepts, supplier management, and general manufacturing operations.
- Project management experience and a solid understanding of problem solving tools including design of experiments, root cause analysis and statistical process control principles preferred.
- Experience with any of the following: mechanical enclosures, casings, plastic parts, injection molding, tooling, jigs, fixtures, or automotive high volume quality manufacturing engineering.
- Understanding of GD&T Geometric Design & Tolerance, as well as statistics.
- Understanding of mechanical properties of materials as they relate to manufacturing requirements.
- Understanding of DOE principles.
- Ability to travel periodically domestic and overseas.

Areas of Expertise within Manufacturing Design Include:
- Supply Base Engineer
  o In this highly visible role, you will manage selection, implementation & optimization of manufacturing processes for mechanical enclosure subassemblies for our legendary products. You will utilize your Mechanical Engineering experience and work cross functionally with Product Design Engineering and Industrial Design to assess product features for manufacturability, and recommend capable processes and equipment.
  o Responsibilities include developing new manufacturing processes to enable future product design and conducting DOEs to validate process capability. You will utilize your experience working with Global Supplier Managers to identify capable suppliers, assess their secondary processes for capacity, quality and cost.
  o A heavy emphasis will be working with suppliers to define and refine mechanical tooling, fixtures and establish capability / readiness. You may also audit supplier processes and assembly processes as well as
support product phase builds from EVT, DVT PVT and ramp. Lastly you may assist post production quality / cost improvement activity related to fixtures and processes.

- **Supplier Quality Engineer**
  - In this highly visible and highly hands-on role, you will utilize your Engineering, Factory Management & Supply Chain skills in developing and implementing high throughput inspection equipment, leading edge quality systems and ultimately the best products available.
  - Specific areas of responsibility include the following:
    - Inspection & Measurement Equipment development: In order to produce the perfect product it takes great inspection and measurement. Help lead the development of state of the art inspection & measurement equipment for Apple product.
    - Quality Planning: Apply solid understanding of quality control and manufacturing concepts to oversee the development of specific Product Quality Plans (PQP) appropriate to program and commodity. Provide technical direction and guidance to other Quality Engineers supporting the implementation of the PQP. Participate in the program planning and monitoring process assuming responsibility for key deliverables. Identify and direct studies to implement improvements in measuring method where appropriate. Coordinate Quality Engineering functions for multiple programs in the product category that you are responsible for. Interface with internal and external groups to ensure that proper definition of quality expectations and that appropriate assurance techniques are used for the product.
    - Supplier Quality Management: Assist in supplier selection process for new products and sourcing activities. Assess supplier production control and quality programs, identify shortfalls to expectations, and directly secure agreement to correct. Review PQP with supplier and other Apple functional groups to optimize supplier quality programs. Evaluate supplier readiness and adherence to PQP at all development and qualification stages. Monitor each supplier's performance through measurement of production line statistics, company inspections, and audits.

- **Subject Matter Expert**
  - In this highly visible role, you will investigate and develop solutions to overcome difficult technical challenges that require non-standard manufacturing approaches. You will apply your engineering skills to develop an in depth understanding of the process drivers that will drive successful implementation of significant improvements to mechanical enclosures. The following activities fall within the scope of responsibilities:
    - Assess mechanical designs and relate design goals to process, equipment, and material requirements that will be used to evaluate a set of options to solve difficult manufacturing problems.
    - Research manufacturing processes and evaluate them for their potential to achieve technical goals. Develop an expert level understanding of the key process drivers in order to determine how to best leverage process capabilities. Apply that knowledge as the technical resource for other process teams to support implementation at supplier locations.
    - Plan and execute development trials to test feasibility, optimize process inputs, and validate capabilities of process options. Analyze results and provide recommendations based on sound engineering judgment as well as data. Present analysis to key decision makers that will be used to make significant commercial and design commitments.