# 2013 SUMMER INTERNSHIP ROLE PROFILE

<table>
<thead>
<tr>
<th><strong>Job title</strong></th>
<th>Summer Intern</th>
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<tbody>
<tr>
<td><strong>Business Unit</strong></td>
<td>Shared Services</td>
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<tr>
<td><strong>Function</strong></td>
<td>Advanced Technology Centre, Materials &amp; Photonics Capability</td>
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<tr>
<td><strong>Hiring manager</strong></td>
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<tr>
<td><strong>Job type</strong></td>
<td>Fixed Term (employed through SEMTA)</td>
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<tr>
<td><strong>Location of Role</strong></td>
<td>Filton (near Bristol)</td>
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## Role profile

BAE Systems is one of the world's leading global defence, security and aerospace companies. We work at the cutting edge of technology, creating more than 100 new inventions every year for customers in over 100 countries.

As you'd expect, the Advanced Technology Centre of BAE Systems is at the forefront of technology development; be it solving current engineering challenges closely aligned to existing BAE products, or working on novel, innovative research that could provide game changing capability to the company in the future. The ATC operates out of 3 sites in the UK (Great Baddow; Towcester & Filton) and employs more than 300 highly qualified scientists and engineers.

This internship would involve a summer placement in the Materials & Photonics Capability and more specifically the “Electro-Optic Systems” team. As the name suggests, the successful applicant may be involved in a variety of activities such as electro-optic sensors; hyperspectral & infrared sensing techniques; image processing; and infrared signature assessment.

This is an excellent opportunity to work as part of a world class R&D team.

### What you will be doing (Role Duties and Responsibilities)

As part of the Advanced Technology Centre you will gain experience of working within a preeminent research centre alongside genuine National and International experts in their fields. As part of the “Electro-Optic Systems” team your main responsibilities will involve supporting our research scientists in the development of discriminating technologies in in areas such as:

- Camera technology development;
- Multi-spectral imaging techniques;
- Algorithm implementation;
- Infrared signature modelling;
- Atmospheric transmission modelling;
- Trials & analysis.

Your industrial internship will not only develop your technical skills but will also enable you to gain experience in, and develop more general competencies such as:

- team working in order to propose novel solutions to challenging and stimulating problems;
- meeting with customers and experiencing how technology can make a tangible difference current and future defence & aerospace systems;
- planning and managing priorities and workload;
- report writing and presentation skills; and
- communicating effectively within a working environment.

### What we are looking for (Skills and Experience)

**Qualifications / Skills required:**

- You should have completed at least 2 years of a Physics, Mathematics, Computer Science, or similar degree course. The position would also potentially suit an MSc student in a relevant discipline looking for an industrial placement project as part of the MSc.
- 280 UCAS Points
- Strong analysis and problem solving skills.
- Highly motivated with the ability to quickly digest and apply new concepts and develop novel solutions to challenging problems.
- Able to work independently as well as in a team situation.
- Expertise in any of the following areas would be an advantage, but is not essential as relevant knowledge will be gained during placement:
  - Physics of electro-optic sensors;
  - Software development skills (MatLab; C++; etc)
  - Image & Signal Processing;
  - Infrared physics;
  - Mathematical modelling;
  - Practical Engineering skills.