Overview
Drainage systems are an important and integral consideration in the planning and design of road infrastructure. There are a variety of aspects that must be considered to provide an appropriate and economical drainage system on all road projects, irrespective of location, size, cost or complexity.

IPWEAQ in collaboration with ARRB is pleased to offer a two-day workshop on drainage based on the Austroads Guide to Road Design Parts 5, 5a & 5b. These guides will provide designers with information to appropriately manage stormwater run-off through the design of efficient and effective road drainage systems.

Content
The course covers all the basic hydrological and hydraulic calculations required for good road design. Although concentrating on road design applications, learning outcomes can be applied to all drainage design projects incorporating small to medium sized catchments.

Learning outcomes include:
• Familiarising road designers and civil engineers with current best practice in road drainage design (based on the Austroads Guide to Road Design Parts 5, 5a and 5b published in May 2013) and relevant aspects of the Austroads Guide to Bridge Technology Part 8, 2018.
• Outlining application of “Australian Rainfall and Runoff” to road drainage design.
• Describing how drainage conditions can influence road design, road location, design elements and associated structures.
• Providing training focused on meeting local requirements with associated case studies.
• Providing approval authority practitioners with the skills to assess consultant designs and applications.

Learning Strategies
• Lectures.
• Case studies.
• Group Discussions.
• In-class activities.

Who should attend
The workshop is primarily aimed at, but not limited to:
• civil engineers involved in road flood and drainage design
• road design, road safety and traffic management consultants.
• engineers requiring specialist training or understanding of issues relating to flooding and drainage for road design.
• state road authority staff who deal in network management, local road solutions, heavy vehicle management, road safety and traffic engineering.
• graduate engineers looking for specialist skills for career development.
• practitioners looking to refresh or expand their basic flood and drainage design knowledge.
• engineers and designers contributing to other aspects of flood and drainage design, including subdivisions.

Outline
Day 1 will focus on:
• Road drainage objectives and principles.
• “Australian Rainfall and Runoff”, Austroads Guide to Road Design and other documentation.
• Application of “Australian Rainfall and Runoff” to road design.
• Issues and considerations related to flooding and drainage in road design.

Day 2 will focus on:
• Site assessment related to flooding and drainage in road design.
• Scour assessment for bridges and culverts.
• Culverts.
• Floodways.
• Subsurface drainage.
• Environmental considerations.

Course materials
Participants will need a copy of Guide to Road Design - Parts 5, 5a & 5b. Please print out a hard copy or bring it on your laptop/tablet. This is available as a free downloadable PDF via the Austroads website after logging in.

Register online at www.ipweaq.com/courses
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Delivered in partnership with arrb

www.ipweaq.com