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For Practitioners, Policy Makers and Planners in Public Infrastructure



Learning Asset Management

Updated Website Listing of Accredited Courses

On the website you will find an updated list of accredited Masters Courses in asset management available in Australia and overseas.

Master Courses in Asset/Infrastructure Management have been seriously affected by the increasing time poverty of potential students and some that were in existence a few years ago are no longer with us. But each year also brings new ones. Universities are notorious for not keeping their website information current so if you find errors in our list, or new courses come to your attention, please let us know.

This applies to **Courses in Australia and overseas**

The **five asset management learning methods**, we consider here are:

- ✓ Short courses aimed at raising awareness and knowledge of the principles or provide training in particular tools and techniques.
- ✓ a traditional on-site masters course aimed at the part time professional in facilities and asset management;
- ✓ a fully on-line master's course that recognises the growing importance to asset management of business principles and information technology;
- ✓ an innovative new short course that aims at achieving competency for an organisation as well as for an individual;
- ✓ a fully integrated training and development package for an entire organisation, from Senior Management to field operatives.

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What are you looking for?

Asset management is a rapidly growing field and to keep up with demand, agencies - and consultancies - are needing to take on staff that are bright and have potential, but maybe don't have too much knowledge or experience in asset management. Perhaps this is your situation.

i.e. You want to know more, **so that you can DO more.** (*In this case, accreditation is not the most important thing, content and training method is.*)

Or perhaps you feel that your 'in-the-field' experience needs to be complemented with something more rigorous to make that promotion you have in your sights? You may be looking to some formal tertiary accreditation, **so that you can BE more.**

Or you may have been seconded to another area for awhile and now want to get back into asset management again but wonder what has happened during your absence? **You wish to KNOW more.**

Or, perhaps you wish to lift the level of asset management expertise across the board in your organisation? Here, it is not only your learning which is important but the learning of your colleagues as well.

Whatever your motivation there is a vehicle for you. We look at a number of them in this issue and on the www.amqi.com website you will find our updated list of courses, accreditation and training opportunities. Short courses are presented by both professional and commercial organisations. Then there are tertiary accredited programs. These generally take 2-3 years part-time. But you end up with a Master's Degree from a University. We look at two of these, a traditional on campus course (but with a lot of online material) (p.4) and a fully on-line course (p.5)

And, where knowledge is not sufficient and you need competency - there are also a couple of 'throughout the organisation' options for you. A short introductory course involving your AM team utilising the expertise of Roger Byrne, GHD (p.6) and a fully integrated hands-on development/training package provided by Ashay Prabhu, ACEAM (p.7)

Disclaimer:

If you think you have heard the names of Roger Byrne and Ashay Prabhu in these pages before, well, of course, you are right. In fact, if you are doing asset management in Australia (or New Zealand, the USA, UK or Ireland) you are most likely to have come across Roger. We have shared a common passion for asset management for over 20 years, borrowing ideas from each other, refining them, building on them, arguing about them - and swapping them back again. Ashay and I share a similar history, although a little shorter, only about 10 years. These are top performers and I am proud to be associated with them. You are truly fortunate if you get to benefit from their expertise.

Short Courses do two things:

Awareness Raising

Specific Skills



The two principle sources of short courses are professionals associations such as the IPWEA and MESA's Asset Management Council and commercial organisations such as IIR, IQPC, etc. Some Universities also run short courses not for accreditation.

Following on from the success of their 2 day awareness courses, the Institute of Public Works Engineering Australia, in association with Maunsell and National Asset Management Strategy Australia, in 2007 held a series of workshops across the country to assist asset managers develop their skills in writing Asset Management Plans. The workshop covered identifying levels of service, predicting demand, preparing life cycle management plans and undertaking risk and financial projections. Like all courses offered by the IPWEA, the workshops were based on the International Infrastructure Management Manual which is widely considered to represent best practice in infrastructure management.

To find out what short courses will be offered in 2008, check the IPWEA website.

MESA's Asset Management Council last year offered a large number of one day courses in "Asset Management Fundamentals". These were offered not only in the capital cities but, like the IPWEA, were also offered in regional centres.

See the MESA website.

Advantages of Short Courses: Good introductions to issues; limited time commitment; limited expense. For broad topics such as the MESA 'Asset Management Fundamentals' they provide good awareness raising. For more specific, and smaller topics, such as the IPWEA 'Skills in Writing AM Plans' they provide direction and guidance (although they do presume a knowledge of the earlier awareness material, without which, the plans could be a 'paint by numbers' approach.)

Disadvantages: There is a often a lot of material to be absorbed in a short period of time and no opportunity within the course to apply and digest. What may seem straight forward and easy when explained by knowledgeable people in the context of the lecture room, may become garbled and confusing when back in the workplace, surrounded by co-workers who have not been exposed to the same information.



The great majority of asset management courses currently available are traditional courses delivered face to face on campus with lectures running one a week over a full semester or more.

But there are changes. Courses may be offered at times commensurate with the work demands of intending students, such as the one described below.

Some Universities offer block teaching - with all lectures condensed into 5 or 6 days. This is intellectually demanding but possibly might offer an option where no other exists, if regular weekly attendance is not possible. Some offer a combination of on site and on line learning and a few are on line only.

Where courses aim at the practitioner with 4-6 years of experience, there has generally been a decline in take up for traditional on campus classes because these practitioners are so busy and their hours so irregular. This has led to a number of on line options (we look at one of these on page *) and you can expect to see more movement to on-line in future years.

If you want to enrol for next year - make your move now!

Go to the website, look at our course listings, follow the URLs to the course of your choice. But don't wait or you may be blocked out of next year's courses. (Australia and New Zealand only - where the academic year runs from March to October)

The *Facilities and Asset Management Course at the University of South Australia* is a good example of today's post-graduate courses. Offered at three levels, you can acquire a Graduate Certificate and then move up to a Graduate Diploma and a Masters Degree. Courses are designed for the part-time, employed, student and are scheduled to run for 3 hours from about 4.30 pm.

This is one of the few courses that take a built environment rather than an engineering focus. Courses have been mostly designed and taught by senior practitioners in the field who are able to bring their day to day knowledge into the classroom. This program gives the student the opportunity to develop and undertake an integrated research project. For part-time students, this project might be related to a real problem or systems development within their employment. Students will normally hold an honours degree or four year degree, and a minimum two years relevant work experience. as well as advanced operational knowledge.

Advantages of traditional classes:

You have the opportunity to mix with other students (this is an important advantage for part time students who generally do not spend much time on campus.) So you get to hear the problems others have faced, how they have tackled them, and you can exchange ideas and solutions. You have the opportunity to make contacts useful to you in other contexts. And it can be more fun. **Disadvantages are obvious:** the key ones are travelling time and inflexibility. However, the USA provides most of its material on line as well so if you truly have to miss a class you can always catch up. I have personally attended a number of these classes and I have always been impressed by the calibre of the students who ask some of the most insightful questions. (And have been the inspiration for some of the SAM articles)

This course is planning to go fully on-line in the very near future, so keep watching their website. (see our course listings on www.amqi.com)

Students are very appreciative of the practical nature of these courses. Being mostly designed and taught by lecturers who are also current practitioners has a lot of benefits for a practical course like asset management.

Benjamin Scholes
Asset Management Project Officer
Department for Transport, Energy and Infrastructure

(SA Government)



“The program offers a professionally accepted method of developing a base of knowledge and set of skills of real benefit to me in practice, giving me a sense of confidence for opportunities in the future.

The coursework has emphasised the importance of recognising the present and future needs of an organisation. Acknowledging this in the context of my work allows for creative thought, based firmly in the reality of our clients’ endeavours. The aim is to balance the operational requirements of their assets and facilities in an effort to achieve their organisation’s long-term objectives.”

The teaching staff involved with the program have been very supportive, and in my case have made for a more comfortable transition back into regular study.

Hint: When researching your options, look at the faculty listings and if you can speak to previous students.

The Newer Breed of On-Line Courses

UNSW Master of Business and Technology

Although this course does not have ‘infrastructure’ or ‘asset management’ in its title, it deserves full consideration by anybody intending to undertake further studies with the emphasis on infrastructure management, rather than infrastructure engineering or design.

I was impressed by a number of features with this course: its focus on the experienced practitioner which ensures that you will learn as much from your fellow students in the virtual environment as you will from the course material, its flexibility and the ability to customise your study with an extensive range of offerings; *and the wealth of information available on its website, far exceeding most other courses on offer.* This is a university which takes its web presence seriously.

With over 1000 students enrolled, this fully on-line masters course has bucked the trend for declining numbers of students undertaking post graduate study. One of the reasons for this is that it has recognised the growing relevance of IT to Business and Management studies. And, of course, with an on-line course, you can organise your study time to suit your work and home commitments. You don't have to have a prior degree to enrol - but you do need experience.

Advantages: You are in control both of subject selection and when you work. Travel is no bar. And you earn a degree. **Disadvantages:** Not much engineering/technical content as other courses within Engineering faculties. No face-to-face contact, but maybe this is not so important as we are getting more at ease in conversing with each other at remote control.

See Course listings on www.amqi.com for details

Learning throughout the Organisation- 1.

Each type of course has its own strengths. For example 2 day courses are great for awareness raising, for opening your eyes to what is possible and making you familiar with the terms and concepts. But they are not designed to provide you with competency in asset management. For one thing, when you get back you have a full in-tray. By the time you have worked your way to the bottom of it, many of the good ideas you have learnt will have been forgotten.

But the worst thing is that although you arrive back 'enlightened' you are still surrounded, and have to work with, the 'unenlightened'. That's the real killer. (The same applies, perhaps with even more force, to those taking traditional university masters' classes.)

Wouldn't it be great if those that you worked with also understood the asset management principles so that you could all work off the same page? What if you had an opportunity to apply the principles - with the full support of management - in that team situation, and get professional feedback to ensure you stay on the right track?

That is the idea behind the "*Vocational Graduate Certificate in Physical Asset Management*" offered by the Chiffley Business School in association with GHD. Although this course is brand new, its content has a long and excellent pedigree. It builds on some 20 plus years of GHD's and Roger Byrne's experience in Australia, leveraged to a high level by the interest and funds of the USA's Environmental Protection Agency, which paid for a version of this approach to be developed for the wastewater industry over the entire USA and is now being extended to the water industry and to local government more generally. I doubt that any course offered anywhere would have so much experience - let alone passion - behind it.

This course is not offered to individuals. It is offered to organisations. If your council or department wants to improve its asset management, it is not enough for just one person (say one finance person or one engineer) to know the principles. If asset management is really going to work in your organisation then everybody involved with it - finance, technical, planning, whoever - needs to know what it is and how they fit in. This is what this course does. It is designed to train the team! Individuals attend a 2 day training session on site



and then have exercises to carry out back in their organisation to develop the competency that goes with the knowledge. Then it is back for another 2 day training, more practice and then a final 2 day training. All practical reports go both to the trainers and to the person you report to. So your progress is evident not only to you but to where it counts in the promotion stakes. This also means that your training is fully supported by your management.

Depending on organisational work loads, this course can be designed to be done in as little as 12 weeks or over as much as 6 months! At the end, the organisation ends up with good asset management practices and a closely knit, well trained asset management team - and you end up with a Graduate Certificate from a nationally recognised training authority.

To find out more, course syllabus, how to get involved, etc, www.amqi.com

Advantages: The team is on the same page! Learn on the job. Reinforcement. **Disadvantages:** Not available to individuals - so speak to your Manager.

Learning throughout the Organisation - 2.



Many, many, years ago when I was learning how to use a computer, I had the best tuition possible: our Secretary said: "Here s how to get in, here s how you get out safely without losing all of your work - oh, and there is no carriage return. When you get stuck, yell out!" I owe my rapid learning to the patience - and availability - of that Secretary.

Learning On The Job - but with on-site guidance

What if you - and your entire asset management unit, indeed your entire organisation from the Council and CEO through to the field operatives, could have that **kind of hands-on guidance and direction when it comes to asset management?** All directed to achieving a careful plan worked out with senior management? If you did, you would probably win awards as have Georgetown and Glenorchy Councils.

If you read the two issues of SAM (215 and 216) on taking a service focus with your asset management, you will be familiar with Ashay Prabhu's work and his "ACEAM Stepwatch model". (If not, have a look at # 216, p 2)

The ACEAM (Ashay's) method for guiding councils towards better asset management is not quick and easy - but it is remarkably successful, and lasting in its impact. The key emphasis is on knowledge transfer and developing solutions within a constrained resource base. The Step-Watch model is more about hands-on grass-root training and less about consultancy delivery. Collation of intuitive asset data becomes a way of life as part of the process and decision making improves with Step-Watch as will be confirmed by Councils in NSW, Qld, Vic, Tas and now South Australia.

Think of it as a two-step approach. In step one, you review and analyse your current situation to identify your current management processes and gaps and strengths. You

discover where you are on a maturity model for asset management and through a two day facilitated workshop from depot to board room, you get to consider the service centric approach to managing the future. This is a grass-root maturity model, not the typical 'have we got a policy and have we got a strategy, please tick a box and self-assess model'.

Unlike benchmarking approaches, this method acknowledges that each council is different and this is recognised in terms of level of funding, current level of knowledge and skills and the immediate external constraints (e.g. legislative or compliance) that it faces.

The focus on service levels rather than assets is what wins over the Council in every case! Councillors are elected to provide service, not to manage assets. Whereas they may be coerced into asset management, it seldom wins their hearts unless they can see that it is leading to better service outcomes.

Having established the current situation and set the targets for the future, Step 2 is about intensive mentoring and implementation. Here the entire organisation is assisted to develop and document strategic levels of service in line with Asset Management policy/strategy; categorise assets by hierarchies; develop and document asset condition assessment, capacity assessment and functionality assessment methodologies, star-rating templates and develop Council specific service level criteria and standards for maintenance, capital, risk and safety – i.e translating the strategic levels of service into operational frameworks.

Every step of way from designing council specific maintenance prioritisation processes, through development of council specific asset performance models, budgeting, and decision matrixes, to capital works planning, policies and formal documentation of Council endorsed Asset Management Plans based on the above, you can proceed in confidence knowing that things are being checked and co-ordinated and kept in line with best practice and your council's own desired service outcomes. This is all done on site, in-house, not in an air-conditioned office in Melbourne, Sydney or Perth.

I consider this the 'Rolls Royce' of asset management learning programs, because I don't think that you can do any better, but Ashay keeps saying 'Its not rocket science'. Ashay's view is that no organisation is stupid or dumb. Every one of the two hundred Councils he has been personally involved with had very talented staff, particularly the walking data-bases in the field. However, whilst pockets of excellence may thrive in silos, the organisation seldom learns. The difference with the Step-Watch Model is that *induces a process of culture change by enthusiasm and inclusion*, incentivising people so that everyone contributes and everyone learns - from Johnny in the truck to the Chair of the Council.

When you are taking a course, the best recommendation is word of mouth, so you speak to former students. In this case, to know more about how it operates on the ground, speak to some successful 'graduates':

Tasmania, Glenorchy City – Emilio Reale, Works Manager
Tasmania, George Town Council, Ngaire Mcrindle, General Manager
Pilbara Regional Group, Western Australia, Adrian Ellson, Project Manager, Asset Management Improvement Program
Phil Miles, Asset Manager Gosford City, NSW
Brad Campbell, Asset Manager, Corowa Shire, NSW
Rohan Roberston, Latrobe City, Vic
Tony Mangiardi, Wyndham City, Vic
Vivek Kangensu, Asset Manager, City of Thuringowa, Queensland.